

Forced Back into the Game But Unfit to Play.
The Late Rebirth of European Industrial State Finance in the New Phase of
Global Capitalism.

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"In free labor, man affirms himself as a being who realizes himself, as a being who creates a world, as a being who acts freely and consciously, as a being who objectifies himself."

(Karl Marx, Economic and Philosophic Manuscripts of 1844).

My PhD path felt a bit like that time I was trying to drive back from the Garda Lake to home and I ended up getting lost in the fields of Peschiera. I was looking for many promising ways out to the main street, but ended up taking many side-ways before finding the main way. At the end of this path, I consider the biggest success of this process to have eventually uncovered my deep love for industrial policy as a field of study. I conclude the PhD feeling I want to know more and with much clearer ideas about myself.

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Introduction

“Prosperity blurs a truth that hard times mark clearer: the choice made among conflicting policy proposals emerges out of politics”

(Gourevitch, 1986: p. 17)

Our visual system makes so that our attention will be attracted by fast moving objects, rather than by what is moving slowly or not moving at all. Researchers and policymakers often look at capitalism in the same way. The urge to try to understand something when there is something clear happening is a natural instinct in the way we think of what is interesting to study.

Rapid change is certainly a marking feature of capitalism, whose extraordinary disruptive capacity makes it capable of transforming our physical and moral world in ways which would have been unthinkable under previous modes of production (Harvey, 2010). However, it is often the case that what we perceive as fast change is nothing more than a moment of acceleration of processes that had been undermining the status quo long before. That is why we study crises only to realize, way too often, that such crises were simply accelerating previously ongoing developments.

I can say that the story I am telling in this dissertation allows to appreciate this variety of speeds at which things happen and to what extent stability underlines in reality deep changes in the underearth whose consequences will become evident only at a certain point.

The overarching goal of this study is therefore to understand how advanced capitalist economies are adjusting to a general shift of weights in the global field of competition. Arrighi et al. (2003) showed that, by the early 2000s, the economies of the world converged in terms of industrialization, but did not converge in terms of wealth, and a “global hierarchy of wealth” remained firmly established, with relatively few “new entries”. The author also nevertheless noticed that China made a formidable exception to this pattern and considered the advancement of China in the global hierarchy of wealth as prospectively posing considerable challenges in terms of pressure on resources, due to the sheer demographic, and thereby economic, size of the country. The more gradual industrial upgrade of India, even within the traditional sectors poses similarly considerable challenges in the long-term (Ray & Mukherjee, 2016).

In principle, the advancement of new players in the global market is not a threat to existing advanced capitalist economies until “profit-oriented innovation” (Arrighi et al., 2003: p. 16) or “core-like production processes” (Wallerstein, 2004) remain geographically located in the first mover economies.

However, the current phase has been featured by a slow but consistent process of catching up which is threatening the established positions of Western capitalist economies in the global arena. Political

economy literature has widely shown the adaptation strategies of advanced capitalism to the challenges stemming from open markets. Among other aspects, this strand of literature has shown how existing institutional arrangements could be conducive to production upgrades which would allow to charge higher prices and thus to maintain a relatively high-wage policy (Sorge & Streeck, 2018).

The problem at hand now is fundamentally different, in that global competition has intensified also in those “quality niches” which previously allowed western corporations to preside the “core-like production processes”. Moreover, comparative capitalism literature has also shown how contemporary capitalism has gradually eroded or converted the institutions that constrained the mobility and power of capital (Streeck, 2009; Baccaro & Howell, 2017), although this perspective remains contested by contemporary Varieties of Capitalism proponents (Iversen & Soskice, 2019).

Therefore, different starting conditions make the problem of adjustment radically different from what seen in the past.

This dissertation is specifically interested in investigating industrial policy as an important part of the adaptation strategies of contemporary advanced capitalist economies to this changing global competitive field. The reason for which industrial policy is here deemed to be specifically interesting is twofold.

On the one hand, it will be shown that the new highly competitive field of global capitalism has created challenges not only for the declining sectors, but also for the high-value added sectors. The idea thus that a transition should be facilitated to “new sectors” in order to escape price competition, which was so popular in the previous industrial policy and comparative capitalism literature, seems to be much less sufficient in this context. This leads to a pressure to intervene both in favour of the losers and for the winners of the transformation, which makes the previous market liberal solutions less viable.

On the other hand, this need to act raises in a moment in which, as shown in the mentioned literature on institutional change, hard institutions have been weakened or radically transformed (Streeck, 2009; Thelen, 2014; Baccaro & Howell, 2017). The ball is now in the court of the state, which remains the main locus of democratic sovereignty and thus is entrusted with fulfilling societal expectations and, to say it with Polanyi, to reestablish the “principle of social protection” that could previously be pursued by domestic institutions (Polanyi, 2001 [1944]: p. 138; Streeck, 2024).

Broadly speaking, there has been a reconsideration of industrial policy in comparative capitalism literature, due to the proliferation of ambitious industrial policy plans even from actors who have traditionally been reluctant to engage in sectoral targeting such as the German government and the European Commission (Schneider, 2023; Di Carlo & Schmitz, 2023). Therefore, industrial policy has become much more interesting to scholars today also because for long time it was considered to be a “non-event”, although industrial policy scholars repeatedly refuted this view, pointing to the renewed forms in which industrial policy reinvented itself (Block, 2008; Clift & Woll, 2012; Trouille, 2007).

In this respect, I also hope that this work may contribute to reintegrate theory and research on industrial policy with broader theories of capitalism, since the two of them have tended to develop along parallel tracks at least over the last 20 years.

Why is industrial policy perceived to have grown in importance today, compared with the past? Certainly, this is because, as mentioned, the most visible consequences of change are to be politically seen now. I will nevertheless try to show how, in reality, the events unfolding today cannot be explained without reference to deeper processes which unfolded in the past, often under the radar. Looking at the events from this perspective, turns the table around and leads us to formulate another kind of question: why are more direct forms of industrial policy coming back only now?

There is however a clear need to specify the object of analysis, before analysing it. What is industrial policy?

As remarked by Warnecke and Suleiman (1975) industrial policy is an “amorphous” term, “[u]sed indiscriminately to include all policies that can aid industry” (Warnecke & Suleiman, 1975: p. 4). Fifty years later, this indefiniteness of the term has persisted, and is most likely going to persist for the time being.

Gourevitch observed the tendency of his times for industrial policy to be defined as “[g]overnment’s policies towards specific industries” (Gourevitch, 1986: p. 51). Although maintaining a high level of generality, this definition considerably narrows down the field of application, in that here the government supports *specific* industries, presumably those considered to be strategic for economic or security reasons. This is what is usually referred to as “vertical industrial policy”, namely a set of policies targeted at strengthening specific sectors of economic activity. The epitomic example of a country having adopted this policy style is identified in the literature with France, which made vast use of forms of “indicative planning” (Zysman, 1983; Shonfield, 1969).

Especially since the early 2000s, horizontal industrial policies came under strong criticism, not only by politicians and technocrats who were overseeing the liberalization process first-hand, but also by a strand of academic literature which saw these practices as ineffective in the context of contemporary globalized capitalism (Aiginger & Rodrik, 2020; Iversen & Soskice, 2019; Tourille, 2007). The more general paradigm has been to advocate for “horizontal industrial policy”, namely policies creating the conditions for firms to be competitive on the global market, without targeting specific sectors.

This distinction between “vertical” and “horizontal” industrial policy, which gained considerable traction in the industrial policy literature, has nevertheless been recently criticized in its analytical leverage (Bulfone, 2020b).

The line between horizontal and vertical is, in fact, often very blurred. For instance, Ahrens and Eckert (2017) argue that an excessively inclusive definition of industrial policy, including “policies for business” at large, is of scarce analytical help when it comes to distinguishing between industrial policy and other fields. For instance, the generous subsidies introduced by the German government to contain the price hikes of electricity and gas during the last energy crisis would have been conventionally thought of as a form of horizontal industrial policy, in that there is in principle no discrimination between beneficiaries, except for those subsidies specifically targeted to the energy-intensive sectors. In a recent paper by Di Carlo et al. (2024) it is shown how even these kinds of “universalistic” subsidies may nevertheless be considered as forms of vertical subsidization because they asymmetrically benefit certain sectors, who actively try to influence the related decision-making process. Rather than in dichotomous terms we should thus think of this horizontal-vertical dimension as a continuum with at an extreme the direct subsidization of specific individually identified national champions and at the other extreme universalistic measures such as cutting social contributions.

While the distinction between vertical and horizontal industrial policy is more focused on the intentional targeting of beneficiaries, Bulfone (2020b) poses a problem from a different angle and argues that what has changed in contemporary industrial policy is not so much the tendency to target specific sectors or firms, but rather the goals of this targeting. On these grounds, the distinction that he proposes is between “inward-looking” industrial policy, aimed at sheltering strategic sectors and players from foreign competition, and “outward-looking” industrial policy, aimed at strengthening the position of national players, strategic sectors and even regions in international markets.

The present work will mostly adhere to the perspective of Ahrens and Eckert (2017), who argued the redistribution of resources among industries and firms to be the specific feature distinguishing industrial policy from other policy fields.

I nevertheless consider important to look at horizontal industrial policy not for its analytical value as an empirical category, but rather for its value in understanding what policymakers thought industrial policy to be. Anybody who conducted interviews on the matter can confirm, in fact, that the interpretation of the word “industrial policy” changes remarkably not only from a political culture to another, but from observer to observer. Having at least a side-look during the empirical analysis at horizontal policy can thus help contextualize our narrative and make clarity regarding how decisionmakers formed their preferences.

When I approached the topic of study, however, I found these distinctions in the literature to be still unsatisfactory for the kind of policies I wanted to analyse. For this reason, I added a further distinction between “strategic” and “compensatory” industrial policy.

Industrial policy is “strategic” when the policymaker not only targets specific sectors or companies, but also engages with them in a strategic way, namely contextualizing the support measures with broader development plans for the sector. This implies that the policymaker is put in the condition to have at least a certain extent of knowledge regarding what are the needs of the industry. The most evident form of strategic industrial policy is the “indicative planning” which Shonfield (1969) identified as a feature of the French system, which involved a deeply informed state apparatus in strong synergy with the private industry.

Conversely, industrial policy is “compensatory” if its main goal is to subsidize specific sectors or corporations without a real strategic vision on how such support should help their general competitiveness. This kind of policy is much less demanding both in terms of state capacity and in terms of institutional requirements. Once a sector is identified as strategic, it will be enough to provide them with financial support. Then, it will be up to the targeted sectors to act strategically. The most evident example in this category are subsidies for the energy-intensive sectors. However, measures like subsidies for the investment and operational expenses related to new hydrogen plants in steelmaking (CAPEX and OPEX) can also be considered as compensatory if they are awarded without a specific general plan.

As can be noticed, the difference between these two categories mostly lies in whether support measures are contextualized in strategic plans or if they just provide targeted help leaving the burden of planning and the creation of “consistency” to the market players. This distinction is, in my view, critical, although it is also admittedly challenging to capture empirically.

It may be useful to point out that compensatory industrial policy does not fully overlap with the concept of “corporate welfare”, which includes forms of state intervention whereby financial support is provided to corporate players without conditionalities attached (Bulfone et al., 2023). Consistently with Bulfone et al. (2023), compensatory industrial policy is also an epiphenomenon of the weakness of the state vis-à-vis the business world. However, the concept of corporate welfare is specifically related to the presence or absence of conditionality underlying the interventions that are undertaken. Instead, compensatory measures can be featured by some forms of conditionality (e.g. maintenance of occupational levels), while strategic forms of industrial policy can also possibly lack any conditionality, once the policymaker ascertained that a certain unconditional subsidy could strengthen the competitive position of the firm or of the sector. More realistically, it is clear that strategic policy also tends to have stronger conditionalities attached than compensatory, but the two dimensions do not conceptually overlap.

Having identified the main terminology of reference, I can now narrow down the focus of the analysis I will be conducting. Exploring all the several policy fields that overlap and are part of industrial policy would not have been feasible in the context of a single dissertation. Therefore, I decided to narrow down

my focus more specifically to the use of state finance, where I include the ways in which the state directly mobilizes financial resources to aid specific sectors or companies. There are three main reasons for this choice.

First, the neoliberal era, with the related regulatory limitation of the instruments of state intervention and the opening of markets, has made states highly careful in using industrial finance to promote sectors or national players, especially within the EU, where such interventions would openly contravene competition rules and the state aid framework. For this reason, I assumed that the state would engage in this kind of intervention as a solution of last resort only for sectors considered to be crucial for the national economic development. Therefore, I considered this specific form of policy to be particularly enlightening regarding the priorities of policymakers.

Second, an important strand of literature has shown a process of steep expansion of assets and functions of national development banks, especially in the European context (Mertens et al., 2021). The rising importance of these institutions in business lending seems to stride with the reported tendency of companies in advanced capitalist economies to become net creditors (Villani, 2021). In a political economy perspective this is puzzling per se, since political economy literature repeatedly highlighted that the power of lending as an instrument for channelling resources to specific sectors required the need to borrow on the side of companies (Gerschenkron, 1962; Zysman, 1983)

Third, the use of state finance for industrial policy requires a certain endowment with state capacity in order to be strategically oriented and targeted. In fact, state finance can take a wide variety of forms, from direct equity interventions, to nonrepayable subsidies or cheap loans. These forms require different degrees of capacity and are connected with different power relations between the state and the recipient. For instance, intervening by acquiring shareholding in a company entails “ownership power”, which is based on the possibility to have insider information about a company, and to intervene in its governance and stabilize the ownership block (Bulfone, 2020a). Therefore, this variety of instruments provides the opportunity to understand to which extent state capacity allows states to intervene in industrial policy and what this implies for the power relations between state and business. This makes for a good integration to the “corporate welfare” literature, which encourages researchers to look at different forms of conditionality in the context of a general loss of state capacity in contemporary capitalism (Bulfone et al., 2023).

We have now identified the object of research: the use of state finance in the politics of adjustment in contemporary capitalism. There are many ways in which we can investigate this phenomenon. More specifically, I decided to focus on three aspects.

First, what explains the different extent to which national states have engaged in forms of sectoral strategic industrial policy? Although pressures come from a global changing context, countries have

reacted differently according not only to the extent to which they were affected, but also to different national political factors.

Second, how has the growing disembeddedment of supranational corporate actors from their home economy affected state capacity to pursue different industrial policy projects? The state can be hindered or discouraged in pursuing adaptation policies by the weaker state capacity of contemporary advanced capitalism, inherited from the neoliberal era (Bulfone et al., 2023). In normal times this disembeddedness is not necessarily visible to the naked eye. It is in moments of structural crisis, when the state has to react and thus needs the cooperation of the corporate world, that the function of “social protection” of the state contrasts most clearly with the “market logic” (Polanyi, 2001[1944]). In these moments of conflict, we can also see the extent to which the state manages to involve capital in its attempts to promote the domestic economy.

This leads to the third topic of interest for this dissertation, namely which instruments the state has adopted in this new context, and for which reasons. The loss of state capacity observed by part of the comparative capitalism literature may thus lead to different responses: the adoption of more “coercive” forms of industrial policy (e.g. direct state ownership) or the engagement in forms of corporate welfare with no conditionality.

Therefore, the three questions pertain to the differences in engagement of the state in sectoral industrial policy, the capacity to implement the wanted interventions, and which kind of instruments are used to meet the goals.

As previously argued, I see the resurgence of industrial policy as a state reaction to a structural competitiveness crisis of advanced economies in contemporary global capitalism. In turn, this implies seeing national economies as part of a more global system where they are interconnected and placed asymmetrically (Wallerstein, 2004; Arrighi et al., 2003).

I considered growth model theory to provide a useful approach in order to connect this global dimension with the country-level dimension.

The growth model approach has argued that political economy has been for long focussed on the varieties of supply-side institutions featuring different economies, such as varieties in educational systems or labour regulation or corporate governance (Baccaro & Pontusson, 2016; Hall & Soskice, 2001). In this way, political economists have neglected the fundamental role that aggregate demand plays in shaping not only the possibilities to growth, but also policy choices themselves. In this respect, reliance of a political economy on a certain driver of aggregate demand does not only influence outcomes if policies that are “incompatible” are adopted, but would also mobilize actors who hold established positions of power in the growth model (Baccaro & Pontusson, 2022). Fundamental in the growth model literature is thus the concept of “core” or “leading” sectors, namely economic sectors of activity on which a certain economy relies to achieve economic growth. In the German case, for instance,

sectors belonging to the export industry have usually been considered to be powerful due to their macroeconomic relevance.

There are two reasons for which the growth model approach is particularly suited to connect the global dimension with national level developments.

First, it allows to account for the interconnectedness of economies at the global level, through the role that the reliance on certain demand drivers has when seen at global aggregate level. In this respect, the growth model literature often highlights a fallacy of composition that derives from situations when more countries pursue an export-led growth strategy at the same time (Baccaro et al., 2022). Since exports have to be absorbed by consumption elsewhere, not all countries can be net exporters at the same time, meaning that the aggregate pursuit of exports as a growth driver turns out to be ineffective and potentially contractionary. This invites to think of governments and economic actors as acting strategically in global terms which, as will be largely shown in the chapters, is highly relevant for the topic at hand.

Second, the growth model theoretical framework enables to hypothesize how the economic structural elements of a political economy, and specifically its core sectors, influence the cognitive framework of policymakers when they have to take industrial policy decisions. In this respect, core sectors are argued to be in a better position to display their interest as the “common” or national interest (Baccaro & Pontusson, 2016).

More specifically, I argue that the presence of two joint causes accounts for state successful engagement in strategic industrial policy: the presence of a concentrated core of sectors driving economic growth and the presence of very large players who alone can mobilize substantially large volumes of investment and from whose success depends the success of the economy at large.

With respect to the first cause, sectoral concentration promotes strategic action at least in two ways. First, when economic downturns occur, the presence of a restricted number of core sectors provides an incentive for policymakers to engage in sectoral policy because it is an efficient means to promote general economic growth. In this respect, the power of the “dominant growth coalitions” on policymaking rests primarily on their structural role as the “earners of the economy” (Baccaro & Pontusson, 2022). Second, growth models relying on sectors that are historically established in a country also lead to a consolidation of structures supporting the dominance of these sectors. For instance, corporatist patterns of bargaining between the state, business and unions in Germany have also survived due to a persistent economic importance of the core industries where these arrangements were born. This is particularly visible in the example of industrial relations. As observed by Thelen (2014), in the “peripheral” sectors of the German economy, especially services, the degree of organization of labour relations has been lower and thus we do not observe the same corporatist institutions that are to be seen in manufacturing. In this way, in periods of crisis, the government will adopt the same consulting

structures adopted in the past and that provided consolidated ways of taking decisions. As observed by Scharpf (1991): “[U]nder crisis conditions, there is not enough time for incremental adaption of institutional repertoires. Policy responses then tend to follow a law of inertia according to which previous solutions are continued or even intensified” (Scharpf, 1991: p. 10)

With respect to the second cause, the presence of a system of large companies and established large national champions allows the coordination of strategic policies able to move large volumes of capital and to carry significant employment impacts. In this respect, it is useful to recall what Shonfield (1969) observed with respect to the French policy of strategic planning, namely that “[t]he planners can only cope if the number of firms with whom they have to deal in any particular industry is fairly small. Otherwise the task of keeping tabs on what is happening, of guiding pressing individual managements to move in the desired directions becomes impossible” (Shonfield, 1969: p. 138)

With respect to the second theme of inquiry, I argue that the further internationalization of the market of reference and of the productive capacities of medium and large corporations makes the state less capable of intervening in industrial policy. I will show that companies from advanced capitalist countries have increasingly relied on foreign markets both as production locations and as sources of demand. Since the domestic market overall importance for the company has shrunk, the state has lost a further “carrot-like” instrument which can be used to persuade companies to maintain investment levels and align with industrial policy objectives. In turn, this weakens the capacity to impose conditionality.

This leads to the third theme, namely the evolution of the instruments used. The expectation here is that, with the scarce efficacy of “light” instruments of incentivization (“the carrot”), more coercive forms of industrial policy will be reintroduced (“the stick”), including direct ownership. Even in those contexts that were featured by solid institutional patterns of coordination, such as corporatist arrangements, the erosion of these institutions and their conversion from “Durkheimian institutions” to “Williamsonian institutions” has weakened their capacity to make actors comply with non-market goals (Streeck, 2009). Therefore, I expect to see more direct intervention also in countries where the state has usually been weak vis-à-vis strong corporatist organizations (Katzenstein, 1989).

Due to the density of the causal mechanisms I am researching, I have chosen a comparative case study as a research design and, more precisely, a most similar systems design (Przeworski, 1970). This choice is due to the fact that I did not start by knowing already a specific outcome, and thus I decided to choose two cases which could have been the most similar possible at least on some dimensions which could influence the final results I am looking for.

For this reason, the choice fell on Italy and Germany as examples of two medium-sized manufacturing-intensive countries with old and large state financial institutions and both within the Eurozone. This allows to control both for the possibility that in one country we may not find considerable industrial policy developments simply because industry is scarcely relevant systemically, and for a vast series of

changing conditions such as different trade policy regimes or different competition regimes. In this respect, belonging to the Eurozone works as a formidable controlling device because it “forces” countries even more to use state finance in order to compensate for the lack of other policy instruments (e.g. national tariffs).

There is nevertheless a considerable number of variables for which it was not possible to control and which could in principle carry an influence on the outcomes of interest. For instance, Italy and Germany also differ in institutional configuration and especially considering the fact that Germany has a strong corporatist tradition, with strong organized interests and a “weak” state (Katzenstein, 1989). According to the Varieties of Capitalism (VoC) literature, this also created a specific institutional environment that made so that Germany could specialize in certain segments of economic activity and thus develop a comparative advantage in global capitalism (Hall & Soskice, 2001). Conversely, Italy is usually considered in the literature to have failed to develop such institutions even when they were consciously pursued (Burroni et al., 2019; Burroni et al., 2021). Some authors saw the historically more “entrepreneurial” role of the state in Italy as a functional equivalent for this missing set of institutions (Simoni, 2019).

Moreover, fiscal space also differs remarkably between the two countries, meaning that Italy, especially after the debt crisis of 2011, has potentially less “financial firepower” at its disposal due to pressure from the European Maastricht rules, as well as by financial markets.

Eventually, Italy has a policy history as an industrial latecomer, featured by a stronger role of a centralized state, while Germany stands out as a federal state which did not properly experience an era of extensive direct ownership of the same extent of Italy (Bianchi, 2002; Naszádos, 2019; Shonfield, 1969).

I have tried to control for these differences by considering them as alternative explanations in the course of my data collection and my analysis, in order to observe the extent to which they can lead to spurious correlations or if instead they can deliver a better explanatory power than the main causal factors I am investigating.

More fundamentally, the countries differ in important aspects of first causal relevance for the theoretical framework advanced here. First, the final sectors contributing positively to aggregate demand differ considerably, with Germany displaying a strong role of automotive and of high-tech manufacturing in general, while in Italy low-end services have contributed comparatively more, and the contribution by manufacturing sector is more sparse (Baccaro & Hadziabdic, forthcoming). Moreover, as I will show at a later point, the composition of their manufacturing exports also differs substantially. Second, they differ in the extent to which their drivers of aggregate demand, which feature their growth models, have remained stable over time (Baccaro & Hadziabdic, 2022). While Germany was strongly export led before the 2008 financial crisis and has remained so afterwards, Italy has shifted from a growth model

led by domestic demand, to one that is much more export-led, although not so much for a boost in exports, but rather for the fact that exports suffered less in a context of repression of internal demand. This allows to see if change in aggregate demand drivers is paralleled to change in policy orientation, and, above all, how corporate actors have engaged strategically in contributing to the shift to another growth model. Stability is an important factor, in that stable growth models are supposed to lead to stable coalitions of actors defending their main macroeconomic requirements.

Within each country, I have chosen to focus on specifically three main sectors of interest, namely the chemical sector, automotive and steelmaking. This sectoral variety allows to appreciate the extent to which different sectors of economic activity have been differently impacted by the changing conditions of global competition. In fact, while automotive stands out as a high-tech sector producing mostly final goods, chemicals and steelmaking mostly produce intermediate products that offer lower leeway for differentiating products solely based on quality, which leads to higher price competition. Moreover, construction and shipbuilding have also been investigated, although much less thoroughly, in order to compare the three main sectors with a sector which depends overwhelmingly on internal demand (construction) and a sector which also produces final goods like automotive, but which experienced pricing pressures much earlier in the story (shipbuilding).

Therefore, every empirical chapter of this book will have a part in which the general approach in the use of state finance for industrial policy will be outlined, together with an explanation of the main changes in the instruments of state finance that accompanied those approaches. Then, there will be sections dedicated to how economic players and business organizations in different sectors of economic activity have gone through the analysed periods and how the state has responded by intervening in those sectors. It will be noticed that for both countries, especially in the case of Germany, the narrative becomes “more sectoral” in the last empirical chapters. This is not an inconsistency in the narrative style, but rather an integral part of the overall story. In fact, the narrative is aimed at showing how governments have shifted their engagement with specific sectors as soon as the crisis in such sectors became structural. Before the financial crisis, the use of state finance in an “industrial” sense is relatively modest in Germany, because the model was to a certain extent “self-driving” and the corporate world was left to its own device.

In order to test my argument, I have resorted to a qualitative approach, by collecting 75 interviews with experts from several industries, ministries, politicians and state-backed financial institutions both local and national. Moreover, I have carried out an in-depth document analysis which included financial reporting of companies, reports by sectoral organizations, policy documents and other published material. I then used secondary sources such as newspaper articles to obtain all the information available on specific political issues such as company crises or public positions of the government and the industry. Eventually, I used quantitative data for descriptive purposes especially in order to analyse sectoral developments and employment of resources by state financial institutions.

Overall, my findings will show how both Italy and Germany engaged in forms of industrial policy, but with substantial differences in their capacity to develop a strategic view on the sectors to be promoted. Once the structural nature of the crisis became clear, the German government managed to engage with the core sectors in strategic ways, making available resources, but also framing the deployment of such resources in the context of strategic plans for relaunching the competitiveness of Germany as a production location. Conversely, Italian governments engaged in vertical efforts as well, but overwhelmingly compensatory, meaning that support was granted in specific company cases but without a strategic solution for the sector as a whole.

Moreover, I will show how both countries have generally struggled to pursue strategic industrial policy projects both due to opposition from the industry, but mostly as a consequence of a substantial loss in state capacity which was inherited by the neoliberal era, when the state withdrew from the active management of the economy. This has led to a situation in which weak states have to face internationalized corporate players who have much stronger structural power and capacity to mobilize resources. In order to cope with this decreased capacity, ministries have increasingly relied on state-backed financial institutions not only for their lending capacity, but also as agencies who “know how to do things”.

In the Italian case, state-owned enterprises have been undertaking one step further and developed into active agents of industrial policy, starting by forms of loose strategic coordination which turn into joint partnership. It is nevertheless still unclear the extent and whether institutionalized fora exist where such strategic coordination is agreed upon.

The dissertation will be structured as follows. In the first chapter, I will briefly offer an overview on the relationship between literature on comparative capitalism and literature on industrial policy, showing how at first the two shared large degree of overlapping and then separated into two distinct streams of research at a later point. In the second chapter, I will outline my theoretical framework, accompanying the reader from a global vision of capitalism to the more specific causal connections we are trying to analyse here. I will also explain the research design and motivate the case selection and the methods employed. The subsequent six empirical chapters, three for each country, recount the relationship between state finance and developments in the industries analysed. The first chapters of Germany (Chapter III) and Italy (Chapter VI) investigate the period between 2004 and the 2009-2011 crisis. The second chapters of Germany (Chapter IV) and of Italy (Chapter VII) narrate the different post-crisis policies in the two countries. The third chapters of Germany (Chapter V) and Italy (Chapter VIII), will explore the period from 2018 to 2024. Interestingly enough, it made sense to divide the country timeline in the same way for both countries, since the 2009-2011 crisis and the end of the 2010s marked periods of important changes in both, although very different in nature. In the conclusions, I will relate my findings to the literature and draw a comparison between Italy and Germany, highlighting how the main causal factors I identified relate to the outcomes observed.

CHAPTER I

Industrial Policy and Comparative Capitalism Literatures: from unity to division

At an early stage, the literatures on comparative capitalism and industrial policy had largely developed in tandem. By the end of the last century, however, the two had clearly developed their own distinct paths, marking a tendency that continues to these days.

This chapter is aimed at leading the reader step by step through the literature on industrial policy, highlighting how its entanglement with the comparative capitalism literature has changed over time. I will argue that this disconnection between the two is partially a side effect of how the role of the state has been conceptualized in the comparative capitalism literature.

Subsequently, I will explain the main theoretical framework underlying this work and how I attempt to bring these two lines of literature together. Starting from a premise regarding an ongoing change in global capitalism, I will then draw the implications for the state as a player embedded in a social order and recur to growth model theory to explain how states take decisions and how state capacity is influenced by the structural macroeconomic factors.

In the final section, I will detail the research design and motivate my selection of Germany and Italy as case studies.

1.1) Raised together, aged separately: a journey in the literature on comparative industrial policy and comparative capitalism

The earlier comparative capitalism literature tended to go hand-in hand with comparative industrial policy analysis, to the extent that examining one without the other appeared incongruous. These studies were all strongly focused on the contextualization of different policy styles according to different arrangements of economic institutions or policy coalitions between influential actors.

From the field of economic history, a piece of work that is still currently widely mentioned is Gerschenkron's *Economic Backwardness in Historical Perspective* (1962), where the author compared different approaches undertaken by latecomers in order to promote industrial catch-up. According to Gerschenkron, industrialization latecomers had to struggle with the problem of capital scarcity, which they addressed by recurring to a series of strategies varying according to the extent to which this capital scarcity problem was intense.

This process of catching up also comes with important consequences for power relations within the developing economy. For instance, Gerschenkron argued that in Germany private banks were the only actors who could oligopolistically mobilize capital for developmental purposes and hold shares in

industrial firms. This provided banks with considerable power within the system. The starting conditions in Russia instead, where savings and banks were too fragmented, made so that it was the state to take up the role of mobilizer of capital. It is interesting to note that Gerschenkron clearly saw a general tendency of industrial capital to emancipate from financial capital over time. After having overcome the early industrialization phase, the industry tends to stand on its feet and emancipate from bank interference.

Differently from Gerschenkron, Shonfield saw the tendency of the state to acquire a higher degree of control over the economy as a lasting feature of Post-WWII capitalism. In particular, the post-war period was featured by two conditions that changed the patterns of international trade: the pursuit of full employment in advanced manufacturing countries and the faster pace of technological progress. More specifically, the advent of full employment made imports more sensitive to rising demand to an unprecedented extent and thus made advanced capitalist countries even more dependent of rising exports, which should come from rising external markets¹.

According to Shonfield, institutional differences, partially reflecting historical legacies, influenced different adaptation styles. The eagerness and capacity of cooperation between the industry and policymakers were specifically important in accommodating different strategic courses by governments. The two opposite cases taken by Shonfield are the UK and France. While France developed a system of planning that was founded on a tight interconnection between the industry and planners, the UK did not manage to develop an analogous system, and the attempts at planning inevitably failed. It is important to stress the point that the solidity of the French style of coordination between industry and the state, which Shonfield defined as a *“conspiracy in the public interest”* (Shonfield, 1969: p. 130), was not grounded in a higher degree of public ownership.

“What is called “indicative planning”, that is a system which relies on pointing out desirable ends rather than on giving orders to achieve them, can be relied upon to work effectively only in a situation where there is a central core of important enterprises which are more responsive to the desires of the state than the ordinary private firm” (Shonfield, 1969: p.84)

Rather the opposite, the author argued that there are many instances in which the planners managed to be more effective in directing private industry than industries where it held shareholdings. These forms of coordination were eased by the institutional setting inherited by history, but at their base there was an exchange of favours between the state and the private industry, whereby the state could offer regulatory advantages or forms of financial support (e.g. cheap loans).

While Shonfield observed how different political economies opened up opportunities or set constraints to policymakers willing to undertake certain strategies, Zysman gave a primary role to the structure of

¹ Shonfield associated this rising sensitivity to imports to the assumption that domestic supply cannot adapt quickly enough to the rising domestic demand.

the financial system. In his seminal work *Governments, Markets and Growth* (1983), the causal connection is straightforward: different arrangements in the financial system determine the capacity of governments to undertake more or less direct forms of intervention in the economy.

“Financial systems influence both the leadership that state bureaucracies can exercise in the industrial economy and the nature of the conflicts about which goals governments should pursue” (Zysman, 1983: p. 54)

The issue at stake is thus who has control over credit allocation and credit pricing within an economy. On this basis, three arrangements are identified: a capital market-based system, a credit-based financial system with government-administered prices, and a credit-based system dominated by financial institutions. While the first is purely based on the market coordination mechanism and the related matching of demand and supply for credit, the second and the third introduce elements of power, in that banks have some leeway for discretion when it comes to credit pricing and allocation. In the version dominated by financial institutions, this control is “privatized”, whereas in the version dominated by government-administered prices, the government can exert direct control on financial flows, in order to guarantee that the sectors and projects that are prioritized politically would never run out of funding.

Similarly to Gerchenkron, Zysman also stressed the need of companies to borrow funding as the main source of power of the lenders, namely banks and the state. The author thus also recognized that the tendency of companies to finance their investments through retained profits would eventually lead to the demise of the source of power that made credit-based coordination possible.

The arrangements making these different systems of financial coordination possible resulted, according to Zysman, from moments of sweeping change, in which the underlying institutions that make them possible were reorganized and reset. Once established, these institutions limit what governments are able to do with the state machine in order to achieve their goals.

The role of moments of change in reshaping the policy approaches of different political economies is the leading theme of *Politics in Hard Times* of Gourevitch (1986). This seminal work of what would be later known as the school of “producer group politics” revisits the history of policy reactions to three different crises: the late 19th century crisis, the Great Depression and the 1970s crisis. The emphasis goes here on how crises change the system of incentives moving actors within a certain economy, thereby leading to the re-definition of previously established policy paradigms. There is here the idea that policy approaches have to be backed by certain coalitions of actors, including capital and certain segments of labour. The position of businesses in the international economy is here a very important trigger of the redefinition of the support strategies of business for certain policy options.

The “orientation towards the outside”, namely the position in the international market is considered as a major factor of relevance. In Katzenstein’s *Small States in World Markets* (1985), where the author investigates different approaches to industrial adjustment in small European countries. According to the author, the policy mix of small European states is strongly shaped by their specific conditions due to their small size. The narrow internal market, scarce international leverage and comparatively lower financial firepower make so that these countries tend to be much more oriented towards market liberalism in trade policy. Protectionism and large-scale subsidization policies would just be too expensive and ineffective.

This does not imply that these countries gave up on industrial policy. On the opposite, the author argues that inactivism in industrial policy is a luxury that small states cannot allow themselves. Nevertheless, rather than conserving the current industrial structure, the type of industrial policy they pursue is aimed at helping the socially difficult transition to the re-specialization of the economy towards other market segments.

“The small European states paid more attention to industrial policy as one possible instrument for pacing the structural changes in their domestic economies. But the small European states shunned the kind of systematic, large-scale reordering of specific industrial sectors that become the hallmark of the statist strategies of Japan and France” (p. 64).

Given this overall tendency, differences are recognized by the author with the respect of how this approach to industrial policy is implemented, which depends on the context of national institutions. For instance, while Austria displayed a more active approach (*orchestrating change*), the Swiss reaction was less interventionist (*accommodating change*).

The discussion in the early comparative capitalism literature was thus geared towards understanding the factors underlying the sharp differences in form and outcome that featured the Golden Age of Fordism. A considerable focus is thus here on identifying the actors who hold positions of power in the distribution of the finance needed for investment. At this stage, it is a given that the state has strong capacity to intervene, although the way it intervenes may be influenced by relatively resistant institutional arrangements.

In the next sections, we will see how the debate gradually started to question this centrality of state policy, emphasizing the role of independent actors, may they be firms or employers’ associations, in taking the initiative in the politics of adaptation.

1.2) Industrial policy in corporatist settings.

Towards the end of the 1970s and the beginning of the 1980s, a stream of comparative capitalism literature started developing a specific interest not so much in the state as a policy actor, but rather as one actor embedded in a system of institutions influencing and constraining its capacity.

During this period, significant traction was gained by studies on *corporatism*, which Schmitter defined as a “[s]ystem of interest representation in which the constituent units are organized into a limited number of singular, compulsory, noncompetitive, hierarchically ordered and functionally differentiated categories, recognized or licensed (if not created) by the state and granted a deliberate representational monopoly within their respective categories in exchange for observing certain controls on their selection of leaders and articulation of demands and supports” (Schmitter, 1977: p 93-94).

Overwhelmingly centred on continental Europe, studies on corporatism dragged at the centre of attention collective bodies and, in particular, the organizations representing the interests of employers and labour. However, the role these organizations play in corporatist settings is not exclusively of representation, but rather, and perhaps most fundamentally, of conflict moderation and mitigation. In this respect, Schmitter and Streeck (1981) identify two competing logics, namely a “membership logic” and an “influence logic” moving both worker and employer associations (Schmitter & Streeck, 1981). While the former logic is adopted by organizations trying to attract new members, possibly by making bolder demands to the bargaining counterpart, the latter privileges engaging in “realistic” compromises allowing to maintain the organization’s legitimacy in the system of bargaining.

According to Sorge and Streeck (1988), these institutional arrangements were also at the basis of the process through which German companies engaged in diversified quality production (DQP) as a shift from the traditional Fordist model of mass production to a new model based on incremental innovation on quality that would help maintain higher pricing, constituting a high-road to competitiveness.

In order to discuss the implications of corporatist theories for industrial policy approaches, it is particularly fruitful to refer to the work of Katzenstein et al. (1989). According to the authors, corporatist arrangements limit considerably the degree of discretion of the German state in unilateral industrial policy intervention, since unions and especially employer associations would strike back such attempts.

“The intrusion of the state in the technological decisions of an independent producer is resented because it disrupts the intricate processes of exchange and negotiation that are institutionalized in the industrial order. The fear is that dirigisme will be substituted for a public process of self-definition among autonomous actors” (Herrigel, 1989: p. 213).

Industrial policy thus necessarily loses in relevance because the state tends to be either a spectator of decisions that are taken by the social partners or a weak actor in pushing agendas which can always be

vetoed. Whether the government has or has not the financial capacity to influence decisions matters relatively, since its room of manoeuvre is always conditional on other actors. Due to this institutionalized state weakness, Katzenstein went as far as to define Germany as a “semi-sovereign state”.

The stream of studies on corporatism partially inspired a subsequent fortunate strand of literature which would put institutions centre stage. It is at this timepoint that industrial policy studies and overall theories on comparative capitalism took two more markedly different paths.

1.3) Varieties of Capitalism and critics

In 2001, Hall and Soskice published a book that would provide the founding text of what came to be known as the as “Varieties of Capitalism” (VoC) framework (Hall & Soskice, 2001). The authors moved from the idea that capitalism should be analysed starting from the strategies that firms adopt to survive or advance in their competitive environment. Such environment is shaped by different institutions, themselves the product of very old legacies, that create incentives for different forms of coordination of economic activities (Hall, 2007). In order to define “institutions”, Hall and Soskice stick to the original Douglas North (1990) definition, according to which institutions are “[a] set of rules, formal or informal, that actors generally follow, whether for normative, cognitive, or material reasons, and organizations as durable entities with formally recognized members, whose rules also contribute to the institutions of the political economy” (Hall & Soskice, 2001: p. 11).

In particular, varieties of capitalism scholars highlight the interconnection of five institutional fields: corporate governance, industrial relations, education and training, inter-firm relations and coordination within firms. The arrangements that countries developed in the five institutional spheres generate, according to VoC advocates, “institutional complementarities”, meaning that “[t]he presence (or efficiency) of one increases the returns from (or efficiency of) the other” (Hall & Soskice, 2001: p. 20).

According to whether the economic activity is based more on market exchange or on non-market forms of coordination, the authors thus split political economies into two fields: liberal market economies (LMEs) and coordinated market economies (CMEs).

I will not here dig into the details of VoC theory or of the numerous variants that have been proposed in order to accommodate countries that did not fit the LME-CME dichotomy (e.g. Amable, 2003). I will nevertheless point to the implications the theory has for industrial policy and that may partially explain its neglect of the topic.

The firm-based institutionalism proposed by VoC emphasises that institutional stability is especially an effect of actors’ efforts to maintain institutions from which they profit and which provide the basis for their comparative advantage. In general, VoC authors recognize that institutional change can happen, as

institutions are negotiated, but this is more likely to be in a direction of path-reinforcement, since firms have interest in maintaining those coordinated arrangements that help them keep their competitive advantage in the World market (Hall & Soskice, 2003). Institutions are thus relatively resistant to change and subject to lock-in effects, whether they may be in the form of “increasing returns (Pierson, 2000) or “positive feedbacks” (Mahoney, 2000).

Surrounded by a complex institutional environment, the state in VoC literature can act at best as a facilitator of processes that are beyond its scope of action.

In this respect, Hall and Soskice clearly state that “[s]ome versions of the modernization approach tend to overstate what governments can accomplish, especially in contexts of economic openness where adjustment is firm led” (Hall & Soskice, 2001: p. 6)

In the rest of their theory-building, the government is generally conceptualized as being at best a facilitator or a bystander. As firms, the government rationally considers the effect that certain measures have for the institutional system influencing the comparative advantage that firms enjoy in the economy. Its agency is thus relatively limited as are the effects of its actions. This makes VoC structurally averse to vertical forms of industrial policy, while the only industrial policy that is conceivable, on efficiency and rational choice grounds, is the one that simply facilitates comparative advantage. There is no need to target specific sectors because such sectors already emerge as an effect of the institutional endowment, which is beyond the control of both firms and the state.

Some approaches attempted to fix this bias of VoC “from within”. For instance, Schmidt (2003) explored the French case and argued for a third variety of capitalism, namely “*state-influenced market economies*” or “*state-enhanced market economies*”. According to the author, although the pervasiveness of the French state has shrunk over time, the country still maintains a type of capitalism that is more reliant on state intervention than a typical CME or LME. Later, Schmidt (2009) distinguished between three forms of state roles (liberal, enabling, influencing) and extended the definition of state-enhanced capitalism to Italy and Spain. The three state roles that she envisioned are differently placed according to the extent to which the state delegates to the market the fulfilment certain functions. While the enabling state tends to cooperate with market actors and fulfil certain functions in place of market actors (e.g. Germany), the influencing state (e.g. France) both delegates certain functions to market actors and more markedly tries to fulfil certain functions in their place. Moreover, the author also takes issue with the role of “enforcer” of the institutional arrangements that the traditional VoC approach associates with the state, arguing instead that governments may act independently of such considerations. Nevertheless, this framework still considers that state intervention to have been strongly limited in the new context of capitalism.

“Although adjustment is firm led in those domains where business now exercises autonomy – in business strategy, investment, production and wage bargaining – it is state driven in those domains where neither

business nor labor can exercise leadership (...) or where the state sees a need to reshape the general economic environment to promote competitiveness” (Schmidt, 2009: p. 522)

In Amable (2003), VoC theories are also criticized for not accounting for the role of the state, which still carries a strong weight in several relevant fields for the overall functioning of capitalism, namely: product market regulation, labour market regulation and education. Amable also mentioned a “mediator” role of the state where the typical VoC coordination mechanisms fail to materialize, especially in Asian capitalism.

Contemporary and alternative approaches to VoC did not allow for a much higher degree of independence or initiative on the side of the state. Theories that focussed on institutional change tended to see policies as part of a broader institutional context and state instruments of intervention as weakened (Streeck & Thelen, 2005). This does not mean that the state was weak per se. Rather the opposite, neo-liberalism requires a state actively pushing for a market order, in which market relations become the driving principle of social life (Streeck, 2009; Baccaro & Howell, 2017).

Streeck (2009) argued that “[T]he national state, for its part, has progressively lost its capacity to govern a capitalist political economy that can expand only by crossing national borders. As capital wants out, the state can no longer keep it in, and therefore no longer wants to try” (Streeck, 2009: p. 202).

The state is potentially strong, but the range of policy options and discretion that the new market order accords to it is strongly limited.

Overall, the comparative capitalism literature of the 2000s generally depicted the state more as an infrastructure than as a player. The state was needed to fill certain gaps and to enforce a certain order, but it was not accorded the capacity or the will to enact change upon the economic structure.

Recent contributions in this line of literature maintain that the institutional arrangements that featured advanced capitalism have changed remarkably and argue that states have become increasingly active, although only in their role of setting certain framework condition for promoting comparative advantage (Iversen & Soskice, 2019). Such approaches however take issue with the idea that capital is highly mobile. Conversely, they stress the tendency of capital to aggregate in areas where it can enjoy certain forms of comparative advantage, which can take several forms including skilled workforce or other locational advantages.

Eventually, some authors advocated for the centrality of electoral politics in explaining different patterns of economic policy. In the framework outlined by Beramendi et al. (2015), the authors emphasize the constraining role that previous policy choices have on contemporary economic policy paths. In particular, the authors create a bi-dimensional space where countries would be ideally located along two axes. One axis has to do with a pattern of strong or weak state intervention in influencing distributional outcomes. The second axis distinguishes between consumption-oriented and investment oriented

economic policies. Placing countries along these two axes delivers a specific “policy mix”. which can be of four types: Equality (investment spending and strong state), Status (consumption expenditure and strong state), Capture (consumption expenditure and weak state), Competitiveness (investment spending and weak state). These are orientations that are somehow “sticky” because deeply institutionalized, but they are also the effect of previous political choices. They then try to associate a value-based dimension, whereby investment policies should be associated with higher universalistic tendencies, and consumption-oriented policy with particularistic tendencies.

Furthermore, a socio-political element steps in, since these policy styles are supported by a specific set of actors which then are electoral constituencies, thus helping the reiteration of the existing policy paradigm. The power base of economic policies, according to these approaches, is thus electoral politics and broader social consensus, both when considering the origins of the policy paradigms they define and the way through which such paradigms survive the test of time.

1.4) The growth model approach

The VoC literature incurred into criticism due to its limited capacity to explain change, its difficult generalizability beyond a limited number of countries and its neglect of important influential factors in political economies, among which government orientations. It took nevertheless some time before an alternative paradigm could emerge, providing an equally encompassing lens to analyse capitalism. This role has been taken by the so called “growth model theory” (Baccaro & Pontusson, 2016). Due to the use that will be done of growth model theory to develop the main arguments of this book, it will be useful here to deal more extensively with the growth model approach.

Growth model theory started from a less common critique to the VoC approach, namely its limits deriving from considering only supply-side factors (e.g. institutional arrangements) as determining adaptation patterns in contemporary capitalism. Inspired by Post-Keynesian economics and the Regulation School, the authors advocated instead for an approach distinguishing different political economies according to their growth models, whose defining feature is different drivers of aggregate demand.

Baccaro and Pontusson proceeded one step further in the integration with Post-Keynesian economics by specifying that growth models are composed of a *demand regime* and a *productivity regime*². While the demand regime is the short-term response of demand to a shift in the functional distribution of income,

² Lavoie and Stockhammer (2011) defined a *productivity regime* as made up of the drivers of productivity in an economy. Productivity is profit-led if increasing wages lead to lower productivity-enhancing investment and thereby lower productivity. Conversely, productivity is wage-led if firms react to wage growth by enhancing productivity-enhancing investment. In the Fordist growth model, both demand and productivity were wage-led.

the productivity regime considers the supply side, namely responses of productivity to fluctuations in the distribution of income or to rising real wages (Lavoie & Stockhammer, 2013). The term *growth regime*, instead, is used to include the long-term effects of the distributional shifts above described (Baccaro et al., 2022).

The Fordist growth model, which featured large part of 20th century capitalism, was wage-led, meaning that rising real wages stimulates aggregate demand, thereby stimulating investment and leading to productivity gains³. However, the Fordist model exhausted, at some point, its capacity to provide a stable growth path accommodating both demand and productivity growth. The diagnoses about the crisis of Fordism are multiple. For the present work, suffices to mention the saturation of internal markets, the end of productivity gains associated with Fordist production methods and the erosion of the negotiation power of labour (Boyer, 2015).

From the crisis of the Fordist model, different economies varied in their strategies to find a viable model for economic growth. In some countries, firms managed to compensate for sluggish internal demand by relying on foreign demand and thus increasing their exports. When the economy is *export-led*, the main driver for aggregate demand is foreign demand, which implies that foreign buyers have to be persuaded to buy the national products on the basis of a certain price or nonprice competitiveness (Baccaro et al., 2022). If exports are not price sensitive, there is no urge to repress wages and the model can thus become more balanced, as in the Swedish case (Baccaro & Pontusson, 2016). However, if exports are price sensitive, factor costs have to be kept under control in order to maintain the domestic products competitive on foreign markets. This implies that rising wages will daunt demand and thus investment, having a recessive effect on growth. Export-led growth suffers from a fallacy of composition problem when considered as an aggregate strategy at the global level. This means that, although a growth strategy based on export competitiveness may work for individual countries, it turns highly dysfunctional when many or all countries try to pursue it (Baccaro et al., 2022). This is due to the obvious fact that for every exporter there has to be an equivalent importer somewhere else, which means that sustained current account surpluses cannot be obtained by all the countries at the same moment.

Some countries where foreign demand was not viable as a growth driver for the whole economy tried to continue the path of growth based on consumption, by means of easing access to credit and deepening financial markets. Since wages do not raise with productivity as in the Fordist model, rising private debt has been used to stimulate demand, thereby stimulating investment. This model is thus supported by a specific set of institutions, like easy access to credit and deep and liquid financial markets, allowing consumers to take on debt easily and affordably.

³ Reference is often made to the Kaldor-Verdoorn Law, whereby “[p]roductivity tends to grow faster, the faster output expands” (Kaldor, 1966: p. 9). In the Post-Keynesian literature, lower real wages are considered to slow down labour productivity both for the effect on aggregate demand (Kaldor-Verdoorn effect) and by decelerating the rate of labour-saving technological progress and investment. Moreover, higher wages are considered to “clean” the market of inefficient firms and increases the percentage of qualified labour force (Storm & Naastepad, 2013)

Debt-led growth is also inherently unstable and associated with “minsky cycles” (Minsky, 1986), starting when real estate prices grow and households monetize this growing value by using real estate as collateral for taking further debt. This drives the economy into a speculative bubble, which is doomed to explode at the first sign of change of investors’ expectations. A period of recession and deleveraging then follows, where many former buyers have now to sell at loss or go bankrupt. This then can trigger a crisis in the financial sector and a consequent credit crunch affecting also the industrial economy (Kohler & Stockhammer, 2022). Typical examples of countries associated with this model of economic growth are the United States, the United Kingdom and Spain before the 2008 financial crisis (Baccaro & Bulfone, 2022; Reisenbichler & Wiedemann, 2022; Kohler & Stockhammer, 2022).

The incidental beneficiary of debt-led growth from an industrial point of view is the construction industry, which benefits from the rapid expanding of the book of orders and thus increases investment, which then leads to rising occupation. However, the industry is obviously affected by the same cyclical tendencies as the model itself, making it an unstable driver for growth.

These are the main adaptation strategies identified by the growth model literature with regard to Post-Fordist strategies of economic growth. However, the value of this scheme identifying drivers of economic growth is not only taxonomic, but also analytical. It allows primarily to have a systematic view regarding the viable options to stimulate economic growth in open economies, and thus to see how countries move close or far from them. The empirical realities tend to be more complex. For instance, the Netherlands, usually categorized as an export-led growth model, has also displayed very high levels of financialization and household debt that are usually a feature of consumption-led models (Stockhammer & Kohler, 2020).

Moreover, some economies have followed hybrid growth paths that are neither export-led nor wage or debt-led. These growth models are defined as “balanced”, because they rely in similar proportions on multiple growth drivers⁴ (Baccaro & Hadziabdic, 2022). This is the case for instance of Sweden, especially before the financial crisis, when expanding exports were accompanied by rising real wages, productivity gains and rising household indebtedness (Erixon & Pontusson, 2022). Some other economies have instead displayed hybrid features but with negative consequences. This happens especially in situations in which a viable growth driver is not found. The epitomical case is Italy, where the transition from the Fordist model of growth was not compensated neither by recurring to higher private indebtedness, nor by an export boom (Baccaro & Bulfone, 2022).

⁴ In Baccaro and Hadziabdic (2022), four demand components are identified: consumption, investment, government expenditure and exports. If the growth contribution of a single demand component is larger than 40%, that demand component is the leading one in the growth model. A growth model is defined as “balanced” if the growth contribution of exports is between 30 and 40% and thus the joint contribution of the three drivers of domestic demand is less than 70%

Other growth models are derived from the interaction between demand side and supply-side factors. This is the case, for instance of FDI-Led growth models. Ban and Adăscăliței (2022) argue that East-Central and South-Eastern Europe have relied on a model driven by exports but conditioned on the capacity to attract foreign direct investment by multinational corporations. Analogously, Bohle and Regan (2021) show the differences between the FDI-led growth model of Hungary and Ireland. While the former has relied heavily on manufacturing foreign investment, the latter has targeted large corporations in the ICT sectors, whose statistically grasped growth contribution often simply reflects the onshoring of intellectual property and intangibles in the country by tax-avoidant corporations.

Although standard growth model theory has been overwhelmingly focused on aggregate demand, complementary or competing approaches have attempted to introduce the supply side of the story. Hassel et al. (2020) provide an overview of possible institutional foundations of growth regimes, by identifying associations between three main spheres: the demand side (e.g. prices, debt, wages, social expenditure, etc.), socio-economic institutions (e.g. market regulation, financial system, collective bargaining, etc.) and supply-side (e.g. market conditions, labour costs, skills, ICT development, etc.). They therefore identify five growth regimes within Europe, three of which rely on export, and two of which rely on consumption as demand drivers.

So far, we have discussed the “hardware” of the growth model, namely the macroeconomic dynamics driving growth and productivity. This is nevertheless only one pillar of the growth model framework. Different models of economic growth rely, in fact, on a set of political and social factors contributing to the stability and success of the economic model.

For this part of theorization, Baccaro and Pontusson (2022) rely particularly on producer group politics, although building further on it. They thus outline the concept of “growth coalitions”, to describe social alliances formed in order to ensure that certain functional policies to the growth model are pursued. Growth coalitions are overwhelmingly driven by business, but can also co-opt labour in order to create a base of political consensus. Similarly to Gourevitch (1986), the authors also hypothesize a stratification of labour according to its sectoral interests and skill levels, which also means that different fractions of labour will be more or less extensively co-opted in different growth coalitions. These different coalitions thus allegedly push for a “growth strategy”, which is generically defined as a “[s]et of policies to generate growth and as such represents a deliberate intervention in the economy” (Baccaro et al., 2022: p. 12).

Some contributions of the growth model literature have tried to give more crispness and thickness to the political coalitions and institutional arrangements underpinning certain growth models.

Digging into the German case, Höpner (2019) identifies a set of institutions and ideological devices that make up an “*undervaluation regime*” aimed at maintaining the export sector competitive by means of competitive disinflation. Part of this specific regime are strict monetary policy privileging price stability,

wage moderation (also enacted through corporatism with complicit unions) and ordoliberalism as ideological instrument justifying the regime. Interestingly, Höpner argues that such regime was an institutional legacy dating back at least to the immediate Post-WWII period and does not temporally overlap with the transformation of Germany into an export-led growth model. Wansleben (2023) also points to the fundamental role of the Bundesbank, in the context of the export-led growth model, in keeping a monetary policy favouring the competitiveness of German industrial exports.

Reisenbichler and Wiedemann (2022) describe the structural and institutional structures underpinning the debt-led growth model in the US and the UK. In the US, they point to the bi-partisan support of all governments for policies easing access to credit and fostering debt-led growth, such as tax relief measures on debt-finance assets and interest payments, direct spending programs for homeownership and government guarantees on household debt. Moreover, the government also extensively used government-sponsored finance (Fannie Mae and Freddie Mac) to back the majority of mortgage-backed securities. They specifically spot light on the role of the FIRE service sector (finance, insurance and real estate) in backing this policy paradigm. Although Crouch wrote before the growth model framework was conceived, the “privatized Keynesianism” policy regime he identified in the US and the UK largely resembles a set of institutions and policy choices supporting debt-led growth, especially featured by both laxer financial regulation and active promotion of the real estate economy (Crouch, 2009; Hofman & Aalbers, 2019).

Schwartz (2011) goes beyond, arguing that the financialization of the US economic model, and the relative higher-than-average rates of growth, has provided it with a strong base for furthering its power over the global economy. In this respect, the financialized high-growth model of the US did not undermine American manufacturers, but rather helped them establish tighter control over their production nodes worldwide.

“Differential growth both generated large volumes of profit that could be used to take control of critical nodes in production chains and encouraged and validated investment in new production processes related to those critical nodes” (Schwartz, 2011: p. 3).

With respect to FDI-Led growth models, Bohle and Regan (2021) also highlight the role of the state in promoting different forms of FDI through forms of informal interaction and “quiet politics”. In particular, multinational corporations can use their structural power and their easiness to exit to obtain favourable conditions by the hosting governments.

Although these efforts have brought considerable insights, the growth model literature has so far been agnostic regarding the extent to which the state can shape or is shaped by the country’s reliance on demand drivers. Overwhelmingly, there seems to be, although never explicitly stated, a stability bias in the framework, since policymakers should generally be more inclined to undertake policies that are functional to the survival of the existing model.

This seems to be the perspective adopted, for instance, by Haffert and Mertens (2021), who find an overlapping between tax regimes and growth models, whereby tax regimes more favourable to internal consumption will feature consumption-led growth models, whereas in export-led growth models, internal consumption will be taxed comparatively more. They then look at the German case to point to how different producer groups and trade unions from different sectors positioned vis-à-vis a perspective increase in the VAT tax, remarking that differences can be seen along sectoral lines.

Moving away from this “functionalist” read of growth model theory are approaches that try to explain growth models and growth strategies as constituted by economic ideas that are specific interpretations of the previous crises (Oren & Blyth, 2019).

The overwhelming assumption of the literature so far is that the transition from a growth model to another does not usually happen by political diktat and there will be an overwhelming set of actors who will oppose such transition.

Moreover, without careful qualitative work, the risk in which a functional reading of the growth model perspective leads is a post-hoc rationalization of strategies and actors coalitions. The fact that a certain policy has benefited certain actors is often taken as a sign of the influence of such actors on the policy considered. This may also lead researchers to bias when considering the most salient policies.

In sum, there is still high uncertainty related how the economic-structural element of growth model theory relates to the social-coalitional element and, thereby, to the policy element of it.

How did growth model theory relate to industrial policy studies? To this day, the contact has been rather limited.

Considering FDI-led growth, Regan and Brazys (2017) argue that these models are featured by an active but horizontal style of industrial policy, aimed at building flexible institutions allowing the economy to upgrade along the value chain. This comes as no surprise, since this type of growth model leaves the decisional burden up to the multinational corporations.

Considering the case of the development of the renewables sectors in Germany and China, Nahm (2022) tries to further the theoretical understanding of the connection between industrial policy and demand drivers. In particular, the author argues that “[d]ifferences in the sources of aggregate demand ultimately determine the size of the potential industrial coalitions that can be marshalled in support of climate policy” (Nahm, 2022: p. 449). In the German case, he found that the conversion of many Mittelstand firms to new market segments created a constituency with relevant political clout and structural relevance, which provided also for high political leverage. The story told is nevertheless overwhelmingly an economic-structural one, which is assumed to have had an automatic political spillover, although the political micro-dynamics remain unexplained. Moreover, assuming this

automatism does not help make sense of the scarce support that the solar panel industry received by German policymakers (Ergen, 2015).

Overall, integration between growth model theory and industrial policy theories has so far been either occasional or absent, as also the related conceptualization on the role of the state as a strategic player. Industrial policy and comparative capitalism literatures have thus continued to travel on parallel tracks.

While in the last few sections I have been showing the general developments in the comparative capitalism literature, in the next section I will track the main developments in the industrial policy literature since the 2000s, when the distinction from comparative capitalism literature became neater.

1.5) Re-finding the role of the state: contemporary literature on industrial policy and state finance.

To take stock of the comparative industrial policy literature may look as a tricky task, due to the relatively high fragmentation and the difficult to identify some systematic schools of thought. I will thus divide this section into three main debated issues.

A first set of scholarly work has tried to identify how the instruments of industrial policy have been evolving in the neoliberal era. The issue at stake here is to understand if and how the state has retained margins for more vertical and selective forms of industrial policy and how support for “national champions” has changed in forms. I include in this categorization the literature framing industrial policy from a macro finance perspective, which stresses the weakness of the state and the emergence of a post-neoliberal paradigm, whereby governments increasingly rely on forms of support contemplating scarce conditionality and a high degree of financialization.

A second line of literature has investigated the factors driving change in industrial policy approaches in specific countries. Arguments from these authors often stress the role that producer group politics, civil society or ideas have had in shaping industrial policy approaches at the national level.

Third, a strand of literature has been more specifically concerned with the renewed role of state-owned financial institutions, and specifically national development banks. While it can be argued that this literature can easily be included in the first group, I considered it to be appropriate to dedicate it a separate section due to the central role that state finance has in this dissertation.

It might be unnecessary to mention that these lines of debate are distinct but not necessarily divided. As a matter of fact, authors investigating the instruments of industrial policy also tend to give an explanation regarding the factors for which certain instruments have been privileged compared to others. For this reason, the attentive reader will notice that some authors and papers are cited twice in different sections.

This was however not necessarily the rule, and the distinction lines are justified by the difference in the centrality of one or the other aspect for the main arguments of these authors.

1.5.1) Evolving instruments: industrial policy in the neoliberal era

A considerable part of the literature on industrial policy has been emphasizing how the changing global conditions of financialization and globalization have changed the capacity of the state to pursue direct forms of industrial policy as in the past. The fact that governments had to give up certain instruments is taken here as a given, and scarce explanatory effort is done regarding this phenomenon, which is most commonly seen as the result of a series of exogenous influences, such as internationalization, financialization and new structures of global governance.

These studies tend thus to be more markedly descriptive and to account for how different countries adapted their strategic toolkit to the new conditions. The line of debate between these different accounts is the extent to which the vertical forms of industrial policy are considered to have vanished in the new neoliberal order or how elements of verticality remained under a new guise.

Although not primarily dealing with industrial policy, Iversen and Soskice (2019) argue that the state has maintained significant capacity to intervene in contemporary capitalism. However, this capacity of intervention is merely associated with horizontal forms of industrial policy, targeted at reinforcing existing institutions and in promoting competitive advantage and innovation.

Schmidt and Woll (2013) define the renewed forms of state intervention as “neo-statism”, a form where the state relinquished to more direct forms of industrial policy in favour of a strong, and even stronger, regulatory role. The goals are the same as old industrial policy, but instruments have changed.

A more complex account is detailed by Szalavetz (2015), who provides complexity to these general trajectories of change identified. The author argues that the 2008 financial crisis did not mark the beginning of a “revival” of state intervention. Rather, what is observed is a process of convergence, whereby states who began from a more “liberal” approach to state intervention adopted more interventionist practices, while states that were traditionally more “dirigiste” moved towards more liberal forms of intervention. However, the new forms of intervention on which countries have converged are markedly more horizontal and innovation-oriented.

Extensively dealing with the Swedish case, Grafström (2024) shows that the Swedish industrial policy trajectory has been featured, especially after failures of the shipbuilding bailouts of the 1980s, by high scepticism towards vertical industrial policy, in favour of more horizontal approaches. This creates resistance towards a possibly needed shift to more vertical forms in light of new challenges.

Showing the discrepancy between neoliberal rhetoric abroad and developmentalism at home, Block (2008) traces the history of the US “hidden developmental state” starting in the 1980s. Differently from the more ideal-typical forms of developmental state, however, the US version of it completely lacks coordination between agencies and it pursues its goals through a marked commodization of the produced knowledge. Dealing extensively with the US role in finance, Hockett and Omarova (2015) argue that the US has been playing the role of a “developmental finance state”, both in its role as regulator but even as a direct player, for instance through the use of Freddie Mac and Fanni Mae to promote investment for desired ends.

Much of this literature has also stressed the point that the state did not give up vertical industrial policy, but rather transformed the means of pursuing it, for instance by means of partial privatizations or regulatory instruments (Bulfone, 2020; Thatcher, 2014; Colli et al., 2014).

For instance, Clift (2017) argues that the French state has adapted its dirigiste tradition into a form of “neo-dirigisme”, where old forms of credit allocation are replaced by new and old instruments converted to new ends, such as regulatory incentives, state-backed finance, R&D policy and support for strategic sectors.

What does it mean to use regulation as an industrial policy tool? Hardie and Macartney (2016) provide an especially insightful example of how even specific national level implementation of EU regulation can be used as an industrial policy tools. Comparing the German and French case, the authors show that governments in both countries adhered to substantially milder forms of the EU-pursued ring-fencing regulation in order to protect their market-based banking model and the related financial players.

Part of this literature on the new forms of industrial policy has found a useful reference framework in the concept of “economic patriotism”, defined as “[e]conomic choices which seek to discriminate in favour of particular social groups, firms or sectors understood by the decision-makers as insiders because of their territorial status” (Clift & Woll, 2012: p. 308). This popular strand of literature sets as initial analytical observation the fact that governments are faced with the uncomfortable situation of having to respond to demands from their constituencies in a context where global interdependencies have restricted the range of available instruments. From there, scholars adopting this concept try to understand how and under which conditions governments intervene.

Clift and Woll (2012) argue that the new forms of economic interventionism have shifted away from the conservative approach exemplified by trade protection and subsidies, in favour of a form of “liberal economic patriotism”, contemplating particular forms of aid such as selective liberalization. What most markedly distinguishes this literature from other authors who questioned the demise of vertical industrial policy is their emphasis on the fact that such policies aid specific “insiders” (e.g. national or sub-national champions) in their process of establishing their position on the global economy. Relevantly, the authors

do not consider it to be mandatory for economic patriotism to be oriented towards the national level, and they allow for sub-national or supranational forms of economic patriotism.

Authors referring to this literature thus identified several ways in which the state has favoured insiders, including state-led funding for R&D, strategic tax cuts, active regulatory policy, or the promotion of sub-national units (e.g. cities and regions) as economic competitive champions (Clift, 2019; Crouch & Le Galès, 2013; Grant, 2013; Morgan, 2013; Somai, 2019)

Another strand of literature, overwhelmingly from the field of economics, adopts a more normative point of view and has tried to show through case studies how countries have performed differently in their adaptation strategies. The root cause of all the evils is usually identified with the persistence of vertical forms of industrial policy and specifically of sectoral targeting and national-level policies, although the empirical grounding of these normative claims is often shaky. Conversely, strong emphasis is usually put on the need for innovation-oriented, generally horizontal, forms of industrial policy (Fagerberg & Normann, 2023).

Aiginger and Rodrik (2020) argue that contemporary industrial policy is unlikely to be featured by a return of old-style sectoral targeting with the traditional use of subsidies and incentives. Rather, they envision it as grounded on a collaboration between public and private sectors around issues of productivity and social goals. The two contrasting cases in the special issue where they write are France on the one hand, and Finland, Sweden and Netherlands on the other.

Buigues and Cohen (2020) observed how the French state struggled to adapt its policy repertoire to the changing context of globalization and internationalization. While earlier the state could adopt a relatively successful vertical “High-Tech Colbertism” based on technological risk sharing with the private industry, offensive protectionism and generous public financing, this policy toolbox has turned into a liability in the new conditions of globalized capitalism. In fact, contemporary French policy stands out for new forms of industrial policy verticality mixed with a refocussing on regional innovation clusters.

Conversely, Fagerberg and Hutscheinreiter (2020) bring Finland, Sweden and Netherlands as positive examples of innovation policy styles benefitting also from the institutionalized forms of policy coordination and stability granted by local institutions.

Strictly related to this literature are authors who investigate the role of state capacity in explaining success and failure in undertaking developmental projects. For instance, Yulek et al. (2020) explained different outcomes in automotive development in Turkey and South Korea with different endowment in terms of state capacity.

Related to state capacity, but shifting again to a political economy perspective, Bulfone et al. (2023) highlight the importance of conditionality in discriminating between different forms of economic and

industrial policy. In particular, the authors observe the phenomenon of corporate welfare, defined as *“[t]ransfers from state actors to large, small, domestic and foreign corporate recipients, coming without strings attached or with weak conditionality”* (Bulfone et al., 2023: p. 270). In the overall analysis of the state in contemporary capitalism, the concept of corporate welfare comes as particularly useful in order to understand the logic and the reasons underlying certain forms of state intervention. Recurrence to corporate welfare, in fact, is likely to signal a weakness of state actors vis-à-vis corporations, in that the state is providing support and left to hope that such support will be useful to obtain at least part of the desired outcome.

Another more recent strand of literature also recognizes the specificity of contemporary forms of industrial policy and their relation to state capacity. The framing is nevertheless radically different from the economics-inspired authors described above. This is the case of the approaches analysing industrial policy from the lens of Critical Macro Finance (Gabor, 2023). The emphasis here is on how contemporary industrial policy, differently from the traditional “developmental” forms of industrial policy, is based on de-risking investment and in the reconstruction of price signals in a way that accommodates a desired outcome. According to Gabor: *“[T]he derisking state enlists private capital into achieving public policy priorities by tinkering with risk/returns on private investments in sovereign bonds, currency, social infrastructure (...) and most recently green industries”* (Gabor, 2023: p. 54).

State capacity is here a fundamental part of the explanation, although not in the way it is conceptualized in the economics-inspired literature. In fact, inspired by Onis (1991), Gabor (2023) argues that the critical factor distinguishing a developmental state from a derisking state is the presence of a *“[s]pecial set of institutions relying on a significant element of compulsion of private capital”* (Gabor, 2023: p. 56). The new derisking state attaches little-to-no conditionality on capital. The instruments of derisking are thus overwhelmingly aimed at creating “investibility” through instruments such as financial regulation and monetary policy, thereby strengthening monetary dominance and the power of the central bank (Gabor, 2023; Gabor & Sylla, 2023).

Eventually, a recent strand of literature, overwhelmingly descriptive, has spot light on the expanding functions and ambitions of the European Union in the field of industrial policy, and at addressing the coordination problems between the national and supranational level (Di Carlo & Schmitz, 2023; Lopes-Valenca, 2022). Mertens and Thiemann (2019) argue that a “Hidden Investment State” has gradually developed, aimed at fixing investment gaps. This kind of investment state uses financialized and light-touch forms of industrial policy and has become central in promoting integration goals by investment-driven economic governance. Lepont & Thiemann (2024) argue that the European Investor state has emerged both at the European and at the national level, displaying the specificity of recurring as much as possible to off-balance sheet instruments in order to circumvent the strict budgetary rules.

1.5.2) The politics of industrial policy: producer groups and political consensus

The literature dealt with in the previous section emphasized how state intervention has changed its instrumental toolkit to navigate the complex waters of the globalized economy. Other authors have investigated the social and political coalitions underpinning certain political or developmental projects.

The most straightforward mechanism through which the influence of political factors on industrial policy has been hypothesized to operate is electoral politics. For instance, Ganga (2024) shows a correlation between populist parties at the government and the revival of more direct forms of state intervention, including state ownership.

An extensive body of work has addressed the recent rise of right-wing illiberal governments in Central and Eastern Europe, identifying the power underlying the recent turn to forms of “economic nationalism”.

Eihmanis and Naczyk (2021) directly refer to producer group politics and compare the approaches of SME support and industrial upgrading in Hungary and Poland. What is of relevance here is the strategies used by political entrepreneurs in order to establish a consensus base for their policy turns. In fact, both the PiS (in Poland) and the Fidesz (in Hungary) governments are featured by a strategy of economic nationalism aimed at reducing the dependence on foreign capital in the overall developmental model. However, the two countries differ considerably in terms of the policy approach espoused to reach the goal. The Polish PiS targeted a higher road trajectory, featured by strong technological conditionality and to a larger degree of inclusion of labour in the social coalition underlying its consensus, legacy of the strong ties of the party with the trade union *Solidarność*. Conversely, the Hungarian policy approach is based on direct connections between government and business and by a generalized policy of support to SMEs, with little conditionality attached, and the exclusion of labour.

Similarly, Naczyk (2022) shows how the process of re-domestication of banking in Poland is to be traced back to an earlier period than the rising back to power of PiS, and has been led by a class of “comprador bankers” dissatisfied with their “peripheral” position as subsidiary managers.

Ban et al. (2023) argue that the rise of populist political forces in Central and Eastern Europe has given rise to a new variant of neoliberalism which they label as “national-neoliberalism”, which combines conventional liberal policy with a set of protectionist features aimed at promoting economic sovereignty. They also argue that the survival of such political project is strongly dependent on the support by social blocs that are rooted both in the civil society and in the co-optation of the technocratic elite.

Another comparison of Poland and Hungary by Bruszt and Karas (2020) highlight the differences in the capacity to organize and push demands towards the state by producer groups in the two countries in the dairy sector. While in Poland farmers managed to mobilize their organizational resources to demand an

effective sectoral policy, and thus stroke a “developmental alliance” with the state, Hungarian farmers lacked resources to mobilize effectively and, lacking political representation, their demands remained marginalized.

The capacity of stakeholders to mobilize certain social constituencies in support of specific projects or measures is generally found to make a big difference in the success likelihood of such projects.

Comparing the conditionality measures of the most recent US and EU industrial policy programs, Bulfone et al. (2024) stress the role of different institutional structures and different coalitions in determining outcomes in terms of conditionality. The US measures were featured by a higher degree of conditionality and a larger coalitional base including strong support by labour organizations and cross-party consensus, the latter of which was facilitated by the perceived geopolitical threat posed by China. Conversely, EU measures only attached limited conditionality and left to the member states the task to define more specific conditionality at the national level, while also displaying very weak involvement of labour.

Taking a critical stance from the economic patriotism literature, Callaghan (2012) showed that the national systems of corporate governance influence governments’ reactions to foreign takeovers. Crucial in her explanation is the effect that such takeovers have on existing networks of coordination which the takeover may endanger, thus leading to the mobilization of stakeholders who may be interested in the preservation of such networks. Callaghan and Lagneau-Ymonet (2010) emphasize instead issues of framing in explaining social and government opposition to foreign takeovers. In order to be successful in mobilizing a critical mass for opposition, an acquisition target has to be collectively perceived as a national asset.

The role of discourse and framing in industrial policy is also dealt with in several other contributions. For instance, Bora (2024) shows how the French state has tried to pursue the survival of some form of new dirigisme by structuring the discursive connotation of the debate on industrial policy. Focussing on energy policy, Reverdy and Breslau (2019) investigate how the national framing of the nuclear industry as an asset at the service of the national economy shaped the domestic contrast to the “nuclear rent”, with the goal of keeping energy prices affordable for energy intensive sectors. However, when defending their cause at the European level, national actors needed, in order to obtain legitimation, to change the framing of the issue at hand, switching from *dirigiste* to market liberal tones. The same issue could thus be framed both as a developmental and as a fair competition issue according to the audience to be persuaded.

Taking issue with the explanations based on producer group politics and structural explanations regarding monetary integration, Vukov (2023) argues that national and transnational elites hold agency of their own and have even a constitutive power vis-à-vis the economic interest from which they are influenced. The reasons underlying policy choices are very varied, from the role of ideas, to policy

networks connecting powerful industrial groups to policymakers. In this sense, there is no mechanical transmission from the economic-structural elements to policies.

Eventually, a body of literature has engaged more extensively with comparisons of different peripheral positions within the Eurozone, observing how these influence outcomes in terms of industrial policies or development. By comparing Spain, Portugal, Poland and Hungary, Éltető and Medve-Bálint (2023) show that state aid in the semi-periphery has tended to follow the existing patterns of sectoral specialization, thus favouring incumbent industries, rather than promoting knowledge-intensive sectors, with Spain and Poland performing relatively better in terms of promotion of innovation.

Bruszt and Vukov (2017) point to the role that the European Commission had in strengthening “market-preserving state capacities” and “general administrative state capacities” in Central and Eastern Europe, playing the role of a “liberal developmental state”, whereas Southern European countries were not supported in their capacity building efforts.

The approaches considered in this section share a common interest in the identification and explanation of different social coalitions underlying specific policy options. What can generally be observed is an important, almost predominant role of contingencies in explaining policy outcomes. Rather than general and time-consistent orientations, the specific circumstances at the time when a decision has to be taken seem to influence to a large extent outcomes. Coalitions in this literature are fluid and not necessarily engrained in the economic structure. This emphasis on case specificity, which is crucial to provide a thick description of the empirical world, is nevertheless limiting when attempting to contextualize such cases in overall theories of comparative capitalism.

A recent strand of literature has adopted a different approach, analysing state and non-state activism from the point of view of geoeconomics, namely the strategies through which not only states, but also corporations and organizational actors shape the global competitive field (Babic et al., 2022). In particular, scholars using this approach stress the fact that the state is not the only player adopting a geoeconomic strategy. The analytical object of geoeconomics is indeed the multiple strategies pursued by different actors on the global arena, and the interaction between these strategies. In terms of goals of such strategies, the authors stress much more the acquisition of economic strategic positions rather than the projection of state power.

A remarkable contribution of geoeconomics is indeed the concept of “corporate geoeconomics”, namely the strategies adopted by corporate actors to preserve their independence from the states. An interesting line of conflict is here theorised, which sees states willing to maintain control and avoid economic dependencies, and corporations who instead have all the interest in maintaining their operational independence (Moraes & Wigell, 2022). In this respect, authors have discussed about offensive and defensive struggles over autonomy. When they are offensive, such struggles try to enforce dependencies on other players, whereas defensive strategies try to reduce dependencies.

A sizeable part of this work has also been interested in understanding the rising activity of state capital, especially state transnational investment. Babic (2023) shows how contemporary state-owned enterprises engage in extensive expansion abroad which is aimed at achieving strategic positions in the global market and is strongly encouraged by governments because it leads to the occupation of strategic nodes in the world economy. An interesting example in this respect is the international expansion of Deutsche Bahn, who Babic holds to be also part of a strategic motive allowing Germany to exert control over an important sector as logistics.

The next and final section of this review will deal with studies who are featured by similar limits, but more interested in a specific instrument of industrial policy: state-backed financial institutions.

1.5.3) The rediscovery of state-backed finance.

Instruments of industrial policy and the socio-political factors backing their use have been widely discussed in the industrial policy literature reviewed so far. There is however a field of research which has been specifically dedicated to the rising deployment of state—backed finance, especially after the 2008-2011 financial and sovereign debt crises.

Belonging to this groups is the work by Mertens et al. (2021), where the growing importance of national development banks (NDBs) in Europe is seen in the context of the rising of a transnational “hidden” European investment state (Mertens & Thiemann, 2019). The contributions to the volume point to the general trend of growing assets of national development banks in Europe, including some case studies highlighting differences in national paths. From the country chapters, three groups of countries appear to emerge. The first one includes those countries with large and old development banks, such as Germany, France and Italy. These banks tend also to be those with a proper developmental mandate and use a very broad array of instruments, including direct acquisition of large company shares (Mertens, 2021; Thiemann & Volberding, 2021; Bulfone & Di Carlo, 2021). The second group is composed of smaller development banks of recent foundation or revitalization, such as the Spanish ICO, the Greek banks and funds, and those of CEE countries, especially the Baltics (Clifton et al., 2021; Mikheeva & Juuse, 2021; Bastan, 2021). These banks have been mostly used to channel European investment aid, or as a short-term counter-cyclical instrument for SMEs. The third group, including Poland and Hungary, is made up of those banks that underwent a transformation into vehicles of a more interventionist industrial policy aimed at bringing certain sectors under national ownership (Piroska & Mero, 2021). These banks are strongly geared towards the internal sector, especially exporting SMEs, although the developmental nature of their mandate is partly questioned by other authors (Scheiring, 2020).

The reasons given for the rising use of state finance are several, but there is a general consensus that considerable motivations have been the fact that instruments such as loan and guarantees are “budget-

light”, as well as the status of many of these public banks as off-balance sheet institutions helping circumvent strict budgetary rules within the EU context (Lepont & Thiemann, 2024).

However, the authors in this line of literature do not limit themselves to a description of the growing role of national development banks, but also investigate the power dynamics creating an unlevelled playing field between different financial institutions. Differences in size also largely reflect differences in power when it comes to the constraints of European regulation. In fact, larger development banks tend also to be the older ones and are more able to circumvent European State Aid regulation (Volberding, 2021). Conversely, development banks being smaller and from less wealthy countries not only are less able to navigate EU State Aid regulation, but also tend to be more dependent on funding from the European Investment Bank (EIB) for their functioning, leading to an imbalance of power whereby the EIB can overcome opposition to its decisions with some forms of “blackmailing” (Rubio & Thiemann, 2021).

Further studies focus on individual state-backed institution and how their role was re-defined over time according to the country specific and global challenges they had to face. The point stressed by this body of work is the dynamism with which national development banks have not only been used for new purposes, but have consistently fulfilled the same functions in different ways under different conditions. An example is the study by Naqvi et al. (2018) on the German KfW, where the authors show how the bank has consistently supported the export orientation of the German economy and has gradually taken up new functions, among which the stabilization of the German economy after the demise of Deutschland AG.

Similarly to what seen in the previous section, a relatively narrow body of literature has tried to investigate state-backed banks as embedded in a network of social and political actors who to a large extent support their existence and determine their functions.

Focusing on the US context, Hopewell (2017) describes the events leading to the quasi-demise of the US export credit agency EXIM, in a historical period in which US international competitors increased their support to exports. The explanation provided by the author is insightful with respect to the quiet and noisy political factors at play in industrial policy strategies. In fact, the traditionally “hidden” field of export credit turned into a highly politicized issue as an effect of the Tea Party campaign for abolishing it as a symbol of state intrusion in the market. Factually, this has led to EXIM ceasing to operate effectively despite the lobbying efforts from the industrial establishment which, in certain sectors, saw the continuing operations of EXIM as a matter of survival.

Marois (2022) makes a more ambitious attempt at theorising the role of public banks as “contested institutions”, namely institutions whose logic of functioning is continuously subject to social and political forces. This way of framing public banks accounts for the wide heterogeneity in the functions they display across countries as the epiphenomenon of different power balances between influential

actors. In particular, the crucial distinction is between those functions that are somehow unique to public banks, and thus aimed at delivering public goods, and those functions that instead make the bank operate like a market player like another (i.e. *corporatized*). Applying a similar framework to the case of Turkish public banks Marois and Gungen (2016) detail the way in which Turkish public banks have gradually undergone a complex liberalization process that had the net effect of turning these banks into profit-oriented institutions although maintaining some developmentalist features of the past, among which their public ownership. It is relevant to specify that these authors do not see the socio-political influences on banks as shaping them in a consistent way. Rather, public banks are in the middle of contradictory influences, transforming them into hybrid institutions.

The literature on public and national development banks has made an especially valuable contribution by pointing to the rising or continuing relevance of these institutions in contemporary capitalism. However, so far this literature still lacks theoretical ambitions with respect to the role of these institutions in contemporary capitalism. What is the rationale behind their actions? Why do some use certain instruments instead of others? What is their relation with policymakers? These questions have only loosely been addressed. Even the work of Mertens et al. (2021) is restricted to the description of the emerging field of development banking, with very little theorization of the role of these banks in national capitalisms. In this respect, I share Tucker's (2022) critique that a political economy theoretical contribution is fundamentally missing from Mertens et al. (2021), despite the big descriptive merit of the book.

In this respect, the contribution by Marois (2022) constitutes an important advancement allowing to have a scheme of reference regarding the factors influencing the functions of public banks. However, the scheme remains relatively narrow when trying to understand not so much the transformation of a particular kind of institution, but rather its role in the overall strategies for economic development. Marois does indeed leave it as an open question whether such agencies fulfil such functions in the first place, since the shift to neoliberalism as a policy paradigm may have turned them into primarily profit oriented institutions.

Another useful theoretical integration comes from a series of authors who have tried to give context to this return of state finance by defining it as a new form of "state capitalism" (Alami et al., 2022). More than on the goals of the state, these authors seem to be interested in the means used to pursue them and in the power struggle over the use of state financial resources. For the purpose of this dissertation, it is particularly useful to notice that this stream of literature starts from premises that are to a certain extent diametrically opposed to some of the arguments made here. More specifically, there is the implicit idea that state capacity has increased over time and that this skilled use of finance by states and governments is the most visible expression of it.

Kim (2022) tries to provide a specific and measurable operationalization of state capitalism, which he measures by calculating state ownership in equity and financial funds as a share of GDP. His findings

reveal a trend, also in advanced capitalist economies, of rising importance of state equity ownership over time. Perhaps most interesting, the author also shows that this trend has not been the same everywhere and divides the period he analyses into three sub-periods: the early 2000s, the global financial crisis and the early 2010s economic recovery. The findings show that while some countries have persistently expanded, others, including Germany, even reduced their equity ownership in the most recent period.

1.6) Taking stock of the literature: industrial policy and state finance in comparative capitalism.

The previous sections have shown the entanglement between the literature of comparative capitalism and the literature on industrial policy. After a first period of strong overlap, the two have, at a certain point, undertaken divergent paths. Contemporary industrial policy literature has had enormous descriptive merits, providing a vast field of knowledge regarding the forms and social determinants of contemporary state intervention. However, integration between comparative capitalism and industrial policy literature remains currently limited.

Therefore, we know that instruments have changed, we know that there are considerable and contingent social factors determining how these instruments are used, but we still know very little regarding the interaction between specific forms of capitalism and industrial policy. Arguing that this is a gap that needs to be filled also implies a position regarding which economic-structural elements in capitalism (e.g. demand drivers, supply-side institutions, etc.) matter when considering country-specific paths to industrial policy. To a certain extent, this also implies a “step back” in the causal chain compared to the body of work that has been produced to this day. Instruments and social coalitions influencing their use are likely to be influenced by specific and pressing needs of capitalist accumulation in specific historical circumstances and geographical contexts.

The present project addresses this specific theoretical concern by investigating how industrial policy and the use of state finance have been influenced by the specific place individual national economies occupy in global capitalism.

In the next chapter, I will thus detail the theoretical framework underlying this study, by gradually accompanying the reader from the general theories of capitalism to the more specific hypotheses underlying this work.

CHAPTER II

From global capitalism to national adaptation strategies

With this project, I pursue the goal to understand the underlying factors explaining the undertaking of certain industrial policy courses by governments and the reasons for their success or failure. In doing so, I will make use of an approach inspired by growth model theory to explain how the economic structure can influence the courses of action of actors.

However, the explanation of a relatively limited phenomenon like industrial policy approaches requires a positioning on the broader issue of the nature of capitalism. This is what I will do in this section.

The first fundamental paradigm I refer to sees capitalism as a system whose inherent dynamism leads it into different phases, which are to a certain extent consequential to each other (e.g. Arrighi & Moore, 2001; Harvey, 2010; Streeck, 2009; 2014; 2024). In particular, I stress here the centrality of the changing geography of global capitalism as a driver of change in national economies. Capital has the inherent tendency to remove the obstacles to its mobility, and thereby to its profitable employability, as masterfully expressed by Harvey:

“Principle number one is that all geographical limits to capital accumulation have to be overcome. Capital, Marx wrote in the Grundrisse, must ‘strive to tear down every spatial barrier to intercourse, i.e., to exchange and conquer the whole earth for its market’. It must also perpetually strive to ‘annihilate this space with time’” (Harvey, 2010: p. 155).

“The coercive laws of competition (often resisted) impel both corporations and states to seek out advantages conferred by superior command over space and time, as well as technological advances (...)” (Harvey, 2010: p. 158)

This control over space, or this de-territorialization of capital, comes with every kind of change in the productive and consumption geographies in the global economy. The structural drivers of capital accumulation move from one place to another, but they also tend to find at least temporary geographical locations.

“Production entails geographical concentration of money, means of production and labour power (...) Proximity to means of production (including natural resources), labour power and consumer markets lower costs and raises profits in favoured locations” (Harvey, 2010: p. 159).

“It is through the coercive laws of competition and through crises that ‘after the fact’ rationalisations and geographical restructurings to capital accumulation occur (...) highly mobile capital pay close attention to even slight local differences in costs because they yield higher profits” (Harvey, 2010: p. 161-162).

The overarching change that will be looming as a background condition of the story told in these pages is thus a shift in the geography of consumption and production of the manufactured goods within the global capitalist system. Who produces and who consumes goods in the global economy changes over time and with such changes come adaptation strategies by economic and political actors.

The western capitalist economies that developed between the 19th and the beginning of the 20th century thrived in a context where demand growth and the growth of production capacities were relatively limited spatially. On the demand side, this was not only for the relatively higher transportation costs, but also because the bulk of the growth in purchasing power was concentrated in the already advanced industrial countries and the high growth rates made so that the domestic industry could safely rely on the home market for growth, even when exports struggled. This is by no means meant to say that exports were unimportant, but the home market occupied a larger share of the domestic business revenues and investment than is the case today⁵. On the supply side, the western capitalist economies retained the upper edge in terms of production and technological capacity of advanced industrial and consumer goods. Moreover, in extreme cases the system could rely on the relative “safety” provided by the possible use of trade controls in case of important trade imbalances affecting specific sectors.

When countries would open their markets without having a certain sort of price or non-price competitiveness, the consequences could be tremendous for the opening economy. Quoting Gourevitch:

“[t]he first developer, the United Kingdom, grew in an environment without rivals, while followers have a competitor to contend with. The consequence for tariff policy is to orient leaders toward free trade and followers toward protection, because leaders are likely to dominate world markets and hence to benefit from an open trading system, but followers need shelters behind which to build up their competitive abilities” (Gourevitch, 1986: p. 77).

An epitomical example was the crisis of the Italian textile industry under the liberal governments of the late 19th century. Flooded with the cheaper industrial production in series from the UK, the Italian textile industry was facing an existential threat (Coppa, 1970).

The post-WWII period, however, also marked a process of gradual opening of the markets and, subsequently, of institutionalization, especially since the 1990s, of a liberalized trade order whereby especially advanced capitalist countries would gradually relinquish the more “coercive” instruments of industrial and trade policy (Rodrik, 1997; Strange, 1996). This process seems to have been a result of both structural pressures in global capitalism and political processes. A clear example is the OECD Arrangement on Export Credit of 1978, whereby international regulations for OECD countries were introduced, which strongly limited their freedom of engaging in export credit. According to Moravcsik

⁵ It is important to stress the term “business revenues”, namely revenues by individual businesses. While a country could display a high share of export-to-GDP, the factors mentioned made so that the today’s practice of building production plants closer to the final market would be less common than today. This implies that the foreign revenues of a corporation overlapped to a larger extent its export from the home country.

(1989), the role of the US as hegemon and its control over capital markets played a substantial role in compelling countries opposing to liberalization, like France, to accept the liberalizing arrangement.

Clearly, this new “open” system could operate sustainably for the industrial first movers only as soon as the largest part of productive capacity and the competitive edge would remain anchored in the Western world. This was the reason underlying the finding of Arrighi et al. (2003) that, although countries converged globally in the degree of industrialization, this did not come, with few exceptions, with a convergence in living standards. The authors attributed this advantage to the spatial clustering of “profitability-oriented innovations” in the Western world, which perpetuated the existing “global hierarchy of wealth”. Already in the second half of the 20th century, the emergence of Japan and South Korea as industrial powers started exerting strong pressure on this arrangement, as witnessed by the trade tensions between Japan and United States over automotive, that eventually led Japan to introduce export quotas behind US pressure (Urata, 2020).

In the new order, the only instruments left to manage the trade balance are monetary and wage policy, whose net influence on the trade balance is nevertheless ambiguous (Ivrendi & Guloglu, 2010; Koray & McMillin, 1999). Therefore, in open markets, having a competitive domestic manufacturing and high-end services became even more not only a matter of improving well-being by means of international competitiveness, but also a way to avoid that rising imports stemming from rising incomes would turn unsustainable⁶. Countries such as the United States and the UK constituted partial exceptions, in that their role as world financiers and, in the US case, as holder of the hegemonic currency helped them circumvent the limitations of the Thirlwall law⁷ (Cohen, 2012).

However, the last decades have been featured by a gradual, but accelerating, change in the conditions that enabled the first-movers to maintain their competitive advantage.

On the demand side, the rising purchasing power of emerging economies is now a well-established fact. Even a brief look at the pattern of GDP growth since the 1980s shows that the World GDP has tended to grow much faster than GDP in the European Union and North America. This has had obvious consequences for the traditional and new industrial sectors. For instance, in the automotive market, while the USA and the European Union accounted for roughly 60% of the vehicles sold globally in 2005, by 2019 this percentage had fallen to around 40% (IEA, 2020). Analogously, the (current) EU-27

⁶ There is clearly a limit to what can be exported and imported and thus there are a series of products and services that need to be produced, or are more convenient to produce locally. In the realm of goods, the industrial gases (e.g. Nitrogen, Carbon dioxide, Helium) or concrete are most commonly produced on the final market for logistic reasons. With respect to services, it is clear that they have to be overwhelmingly produced on place, although some segments of services have also seen a tendency to be offshored (Leo & Philippe, 2014). Buildings have nevertheless to be built and meals to be served in spatially defined areas. However, it should not be forgotten that many of these services are eventually intermediaries for products stemming from the manufacturing sector (e.g. construction materials, foodstuffs).

⁷ The Thirlwall Law theorized the balance of payment as a major constraint to sustainable growth rates for a country. In this respect, for a country to have a sustainable growth and full employment, it is necessary not only the classical policy of demand stimulation, but the government should also ascertain the import elasticity to demand and the competitiveness of exports (Thirlwall, 1979).

chemical market was worth 30.6% of the world chemical market in 1991, while this percentage had dropped to 14.4% by 2019 (Federchimica, 2024).

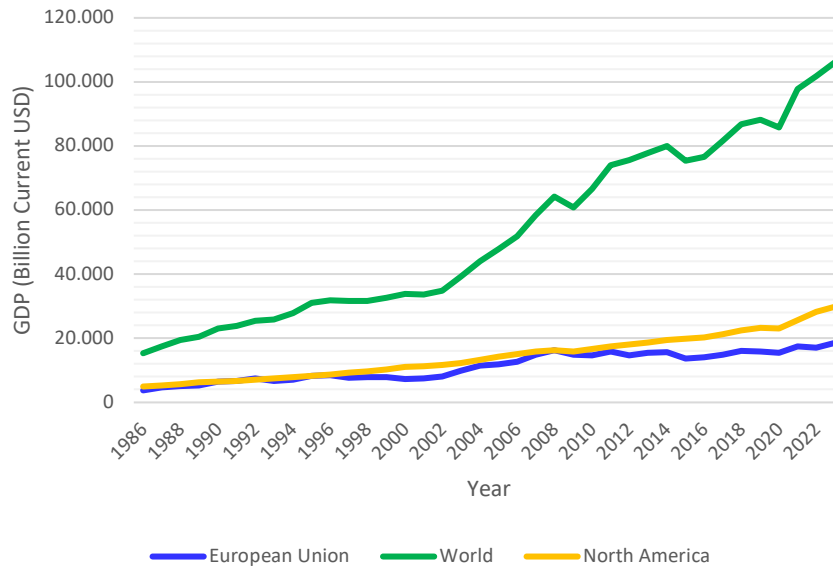


Figure 1 GDP growth in the EU, North America and the World overall (bln, current USD) (World Bank, 2024a)

However, the spatial dimension of supply has also changed, not only quantitatively (as a percentage of world production), but also qualitatively, slowly progressing towards sectors and market segments that were once the stronghold of Western industrial capitalism. The epitomical case in this respect is automotive. While in 2004 the European Union and the NAFTA area produced 54% of the world vehicles, this percentage had dropped to 41% by 2019 (OICA, 2005; 2024). Taking an example of a highly-value added production, the solar panel industry, China accounted in 2021 for 75% of the global capacity in modules and 97% of the global capacity in wafers (IEA, 2022). Even in the field of high-tech patents, China has slowly risen to prominence, undermining the traditional US hegemony in this field (Malkin, 2022). The upgrading is however qualitative also to the extent that it reached qualitative segments that previously allowed Western corporations to charge higher prices. This produced a break in what Arrighi et al. (2003) referred to as the spatial structuring of innovation and thus the related concentration of profitable innovations.

As a result, the first-comers of industrial development have been undergoing a process of competitive pressure, first affecting the more traditional sectors of manufacturing (e.g. textiles and steel), but increasingly moving upper in the chain of value added, where western corporations could previously move to new productive and competitive models such as those of Diversified Quality Production and where constraints to economic freedom could exert a “beneficial” effect contributing to create competitive advantages (Streeck, 1997; Sorge & Streeck, 2018).

This changing global field of capitalism, whereby western capitalism has been exhausting its locational advantages and where capital is more mobile than it ever was, has led to a gradual change in the system of incentives moving actors. In order to understand how this process has unfolded, we should now shift to the micro level and try to shed light on the strategic options that companies face in this phase of capitalism.

2.1) Corporate strategies and national stakeholders in the new configuration of global capitalism

The previous section has outlined the broader changes on the demand and supply side of global capitalism that set the overall competitive framework in which companies operate. Here we will try to make sense of how the incentives change for corporate actors operating within these new conditions.

I thus start from firms' strategic behaviour given the economic environment where they operate. However, while VoC overwhelmingly stressed firms' adaptive behaviour in relation to "supply-side institutions", I give here causal primacy to the role of demand in changing firms' strategic behaviour. In this, I take a closer positioning to Baccaro and Pontusson (2016), since considering the demand side of the story allows to account for the dynamic nature of the capitalist economy and makes growth models more unstable compared to the arrangements identified by VoC.

Demand orients company decisions, in that companies tend to seek for revenues where demand is rising and will thus try to set investment decisions according to the needs of their main markets. This basic observation is of fundamental importance in a world where GDP growth, and the related purchasing power, have started to advance much faster in the rest of the World than in the traditional manufacturing countries. With external markets growing faster, the reliance of Western corporations on the domestic market for rising revenues inevitably starts shrinking.

In purely hypothetical terms, companies could just produce to satisfy the demand of the internal market, once they can make a satisfactory rate of profit. In a context of an open economy, however, this represents a competitive disadvantage for domestic players even in their domestic market vis-à-vis foreign competitors, since this implies missing out opportunities for scaling up that are only possible by drawing from foreign demand⁸. Arrighi et al. (2003) marginally commented about the potential effects of the fast-paced rise of China in the "global hierarchy of wealth", due to the sheer size of the population and the related pressure on demand for raw materials that this would exert. Fast rising purchasing power in a country with such a large population also affects the extent to which the traditionally "big

⁸ Very high levels of public support, for instance through public procurement, could provide a partial compensation for scarce success on foreign markets, although it is unclear the extent to which this is pursuable beyond a certain timespan. Factually, countries that have made wide use of subsidies and public procurement, like South Korea in the shipbuilding sector, eventually ended up crafting internationally successful champions that were oriented to foreign markets.

economies” remain big. If the 19th century industrializing states could rely on their own domestic demand to build “national champions”, this was also because they were the largest sources of rising economic growth and purchasing power in the World.

With demand rising in a country where domestic players scale up on a market of reference that is growing faster and with a much larger demographic base, furthering the scaling up is an imperative to remain competitive. In fact, scaling up implies not only the possibility to charge lower marginal prices through economies of scales, but also enables to mobilize the large amount of investment needed for the innovation which is necessary to stay on the market. Moreover, relinquishing the goal of scaling up makes companies more likely takeover targets, especially when they reach the middle size (Tunyi, 2019). Therefore, contemporary competition in open economies necessarily exerts pressures to export and increase in scale.

This demand-driven pressure to export comes with a parallel pressure to buildup supply abroad. The outwards push away from the domestic economy when looking for demand cannot come without investment in the final market. Although literature on the relationship between export and other forms of internationalization is surprisingly scarce, it appears that export is often complementary or conducive to other forms of internationalizations including outwards FDI (Calia & Ferrante, 2013; Grandinetti & Mason, 2012; Helpman et al., 2004). This tendency stems at least from three factors. First, producing on the final market may entail considerable cost advantages that influence the general competitiveness of a company. Such cost advantages can come from a variety of sources such as cost of labour, labour flexibility, proximity to raw materials, transportation costs and the need to provide in-place assistance to customers. The DIHK survey on the reasons for investing abroad provides proof of such drivers. For the whole period between 2004 and 2024, between 35% and 48% of the companies who invested abroad did so for distribution and customer service, 20-42% for cost saving, and 24-35% for producing to open new markets (DIHK, 2024). Second, local policy may make so that placing production plants domestically may be necessary in order to sell on that market (e.g. domestic content quotas, etc.). Third, investing abroad may be required in order to obtain access to certain intangible assets that are fundamental for strengthening the competitive position of the company. Considering, for instance, technological advantages, a case in point is the recent partnerships of Stellantis in China to make up for the accumulated competitive disadvantage in electric vehicles (Stellantis, 2024). However, intangible assets are not only simply related to patents, but are often made up mainly of customer networks that are the flesh and blood of foreign expansion. According to Masulis et al. (2023), customer-related, marketing-related and contract-based intangibles account for 77% of the intangible assets of companies that are targets in mergers and acquisitions.

From what just exposed, there are thus three tendencies that feature industrial companies eager to remain competitive in open markets. First, the tendency to rely on foreign markets. Second, the tendency to increase in scale. Third, the tendency to internationalize.

These three tendencies have important implications for the relationship between the company and its home market, namely the gradual loss in relevance of the latter both as a demand source and as a production location. This triggers a dealignment between the interest of the corporation and the interest of the actors from the home market.

In fact, in the world of open markets, corporations and their home countries are in a constant struggle to ground the pricing of the goods they provide to the global market. This leads to a continuous interactive process whereby supply strives to adapt to demand.

However, while demand is very fluid and can change abruptly, supply tends to be stickier and to require longer adaptation times. New companies have to be founded, collective agreements have to be bargained, personnel has to be reskilled, financing for new projects has to be found.

Furthermore, adaptation of supply tends also to be slower because the disruptions triggered by the market adaptation process carry heavy consequences for the adapting economy. Taking a tradition dating back to Polanyi (1944), I frame this friction between the pressures from demand and the resistance of supply as the trigger of a tension between the disembedding tendencies of the market mechanism of allocation and the counter-movement by those societies where capitalist relations are embedded.

What distinguishes the positioning of actors in this “friction” is their different ability to be mobile and thus to exert “exit” as a response (Hirschman, 1970). This clearly affects primarily labour. As argued by Beynon and Hudson (1993): “[N]ot all capitals are equally mobile, and not all working people are equally immobile, but in general capital is more mobile than labor. Locations that, for capital, are a (temporary) space for profitable production, are for workers their families and friends places in which to live, places in which they have considerable individual and collective cultural investment; places to which they are often deeply attached, and which may hold powerful emotional ties and socially endowed symbolic meanings to them” (p. 182).

From this quotation a further element is of central importance: not all capitals are equally mobile. While there are corporate actors whose resources allow them a very high degree of mobility and adaptation, others are territorially constrained and display limited exit options. Such mobility options often strongly correlate with size. In particular, SMEs are strongly limited in their mobility opportunities by reasons that are widely documented by the economic literature, such as the lack of managerial expertise, human resources and the possibility to mobilize enough capital for foreign investment (De Maeseneire & Claeys, 2012; Hessels & Parker, 2013; Rahman et al., 2017). However, some industries are structurally less mobile because of the nature of the services or goods they deliver. This is the case, for instance, of the construction industry, whose products must obviously to be built on place, although instances like the Laval case have shown that the world of open markets has allowed companies to use locational advantages elsewhere also in this sector (Refslund, 2015).

Therefore, there are mobile corporate actors, usually medium-to-large international conglomerates, and relatively less mobile corporate actors, usually small and medium-sized enterprises. While the former are in the conditions to allow themselves to be disembedded, and thus able to respond faster to changes in demand conditions, the latter are forced to be embedded and their destiny is thus tightly intertwined with that of their domestic economy.

This entails that the frictions stemming from the market adaptation process divide mobile corporate actors from a broad array of actors whose common interest is to keep the investment commitment of the larger and more mobile corporate actors within the national economy. These are labour and its unions, the government and the local suppliers who depend on large and medium corporations as sources of revenues. For the sake of simplicity, I will refer to these locally constrained actors as the “*national stakeholders*”.

Governments and stakeholders will try to scrutinize and retain at least a certain extent of control regarding the investment policy of large conglomerates. If such forms of institutional or political control would not exist, capital and investment would be just as mobile as in an economic simulation. This has allowed, for a certain amount of time, to settle on a compromise between the large conglomerates and the national stakeholders. Despite the new era of open markets, governments promoted internationalization of their national players as a way to benefit from the new opportunities of the world economy (Clift & Woll, 2012; Bulfone, 2017a; 2019; Zysman, 1983). On the side of the corporation, the efficiency price to be paid was the maintenance of higher levels of investment in the domestic economy than they would have wanted. In this way, the interests of corporations and those of the stakeholders aligned, at least to a certain extent. Clearly, as Streeck (2009) showed, this deal was not completely a win-to-win situation, but came with considerable losses for some national stakeholders, coming in the form, for instance, of labour flexibilization and the erosion of the coordination capacities of employers’ associations.

Moreover, businesses could benefit from the fact that the domestic economy could still provide a series of spatially clustered advantages and structures of innovation of the kind extensively described by the Varieties of Capitalism literature (Hallo & Soskice, 2001; Hall & Gingerich, 2009). For instance, the German model of industrial relations was maintained comparatively more intact in those companies in automotive who, while offshoring the more standardized production processes related to the lower ends of their product range, maintained in the home country that part of high-value-added production requiring highly skilled workforce (Krzywdzinski, 2014).

However, the arrangements described by VoC were more “transferable” than what that literature allowed in the first place. In several cases, corporations themselves purposefully replicated the domestic structures abroad. A way through which this happened is what Manning et al. defined as “*active embedding*”. The authors take the example of the projects of educational upgrading promoted by German carmakers in Romania and China, whereby multinational corporations “[t]ry to explore and then to

transform or align local institutional conditions with global strategic objectives and operational needs, for example for lower-cost S&E talent” (Manning et al., 2012: p. 1213). Moreover, multinational corporations have tried several strategies to embed themselves in the host economies, in order to obtain the positive externalities from being a system insider (Sölvell, 2012).

This process of adaptation by medium and large corporations from the early industrializers is thus both driven by new sources of global demand and by an attempt to circumvent higher factors costs in the host economy, due to higher wages, relatively generous welfare states and, at least in Europe, higher energy prices.

As a result of this adaptation process, national champions have become less “national”. As a high-ranked official I interviewed put it *“the legal headquarter does not mean anything, what matters is where the company invests”* (Interview 50).

Going one step further, I argue that with lower dependence of the company on the home market also comes higher structural power vis-à-vis national stakeholders, which makes it more difficult to use the traditional instruments of informal coordination and moral suasion to coordinate policy and company behaviour. In a way, I use here the argument that Culpepper and Reinke (2014) made regarding the domestic or international orientation of banks as a causal factor for their structural power vis-à-vis the state⁹.

To summarize, the rapid growth of foreign markets and the contemporary industrial upgrading of industrial latecomers has increased the competitive pressure on the firstcomers of industrial development. Domestic corporations have accelerated the internationalization of their demand on the one hand and of their productive capacity on the other, investing where they could benefit from rising demand and lower factor costs. This structural decoupling of the corporation from the national stakeholders has led to a further disembeddedment of corporations from the political economy that originated them. The process of transformation of “Durkheimian institutions” into “Williamsonian institutions” described by Streeck (2009) is thus part of this broader process of redefinition of production relations within global capitalism.

However, this process did not unfold in the same way in every advanced political economy. The structural conditions on the demand side and on the supply side clearly determined the type and speed of the adaptation process. There can be few doubts that, without relatively strong unions and an established system of concertation and collective bargaining, the adaptation process of the German political economy would have figured very differently. Nevertheless, as widely shown by the political

⁹ It should be nevertheless be specified that national states have been holding a larger leeway of national freedom in regulating financial markets, compared to trade in industrial goods, as the still very sharp differences between financial systems and regulations within the Eurozone testify. The domestic market remains however relevant for industrial companies to the extent that their production depends on that market and to the extent that potential incentives/subsidies from that market can impact their overall earnings. To imagine an extreme scenario, measures like the German *Umweltbonus* would be of little leverage for the German government if Germany represented only 4% of the Volkswagen market.

economy literature on convergence, the general result has almost inevitably been a tendency to liberalization and thus disembedding (Streeck, 2009; Baccaro & Howell, 2017).

2.2) From actors' strategies to policy strategies

The previous sections outlined how the changing playing field in the global economy has led first to higher competitive pressure on the earlier industrializers, then to a misalignment between the interests of the corporations and the national stakeholders in their home economy.

Inspired by the work of Streeck (2024), I adopt here a Polanyian framework and start from the idea that this acceleration of the market pressures over societies leads to resistance on the part of the social world where capitalism is embedded. I consider such resistance to be exerted overwhelmingly at the national level, since the nation states remains, to this day, the main reference point of democratic governance. In this respect, democratic governance makes so that the government would be, in one way or the other forced to at least consider the pressure from the counter-movement.

“Today, in all the countries of OECD capitalism, the surviving remnants of the standard model of post-war democracy are being rediscovered and put to use as institutional resources for popular resistance against accelerated capitalist and cultural modernisation and the politically disempowering structural change driven by globalisation” (Streeck, 2024)

This leads eventually to the main subject of this work, namely the different reactions by national governments to the new challenges above described. If we consider the main goal of industrial policy to be the promotion of economic development in a certain community of reference (national, sub- or supranational), the tendency to become a policy of re-embedding is automatically enshrined in its *raison d'être*. The re-embedding capacity of industrial policy will depend, however, on the capacity of state elites to attach conditionality on the resources that are made available (Bulfone et al., 2024).

In certain respects, Clift and Woll (2012) recognized this territorializing nature of industrial policy, in that economic patriotism entails the discrimination in favour of “insiders” based on their belonging to a certain community. In particular, economic patriotism correctly pointed to an inherent pressure exerted on governments between the position of states in a globalized world and the demands from the national constituencies to intervene. However, economic patriotism was overwhelmingly based on a dichotomy between “insiders” and “outsiders” that I deem here to be inaccurate in a global capitalist context where, as argued, national players are becoming less “national”. Transnational corporations may well be considered insiders, but their interest does not need to overlap with the interest of the national community, since the disembedding tendency of contemporary capitalism increasingly pushes national capital to loose its territorial status and thus to become a factual “outsider”.

Therefore, industrial policy is not only constituted by attempts at favouring insiders, but also, and perhaps today most fundamentally, by attempts to keep insiders tied to a certain territorial community, as well as making sure that the effects of their internationalization are transmitted to the community of origin.

This study is nevertheless concerned with a specific form of industrial policy, namely state finance. There are three reasons for which I deemed state finance to be especially interesting compared to other fields that also contribute to the definition of an industrial policy approach of a country, such as fiscal policy or educational policy.

First, there has been a now widely documented tendency for state finance to increase in importance over the last decades. This has particularly affected economies within the European Union trying to find ways to circumvent restrictive fiscal rules (Mertens et al., 2021; Thiemann & Lepont, 2024; Endrejat, 2024). However, this process is by no means restricted to Europe. Several studies have shown how the global field of state-backed finance has been changing and national development banks have come to play a prominent role in developmental plans globally. This is the case, for instance, of the Chinese Development Bank (CDB) and its role in channelling the savings of other public banks, as well as of Brazilian BNDES (Chen, 2020; De Oliveira, 2020). Furthermore, state-backed finance has risen in importance as one of the constitutive elements of global competitiveness. For instance, Hopewell (2017; 2021) shows how the effectiveness of the OECD agreement on export has been put into question by the more extensive use of export finance by China, while the weakening of the US EXIM has posed competitive challenges to specific segments of the US industry.

Second, state-backed finance allows a much higher degree of flexibility to policymakers engaging in different forms of targeting. For instance, by comparison, fiscal policy exposes the state to higher scrutiny from competition regulators. Conversely, the deployment of state finance can take multiple forms, such as formally corporatized public banks, which do not imply a direct relationship between the state and the beneficiary that is selectively targeted. To be sure, state-backed banks are also closely scrutinized by competition authorities, but their more “private” nature and their more sophisticated financial means allow them larger room of manoeuvre, as shown by Volberding (2021). Most importantly, state finance provides a remarkable variety in the instruments at hand, varying from guarantees to direct shareholding by the state. This, in turn, allows to qualify better our understanding of which means serve which purpose, and to evaluate whether more direct forms of intervention go hand-in-hand with an attempt at re-embedding.

Third, I considered the use of state finance as specifically relevant because, as previously explained, the turn towards neoliberalism turned it into a form of industrial policy of last resort and it takes a specific policy effort for the state to re-engineer forms of interventions in this field. The idea here is that, since contemporary governments more reluctantly and less frequently intervene by means of direct

mobilization of state finance, they should do so only for functions that are ranked particularly high in their priorities.

The use of state finance can thus be a particularly good proxy for the most urgent priorities and matters of intervention. However, it follows from the outlined considerations that to understand the politics of competitive adjustment, one has to understand the reasons for which decisions on the deployment of state finance are taken. This implies understanding how policymakers think and, above all, what are the main factors leading them to one preferred course of action. Several schools of thought can be identified on this issue, which can be differentiated according to the emphasis with which they stress specific causal factors for policy outcomes.

Power-based explanations stress the role played by powerful actors, due to their structural position or their capacity to mobilize political resources to obtain certain policy goals.

“The victorious interpretation will be the one whose adherents have the power to translate their opinion into the force of law” (Gourevitch, 1986: p. 17).

Included in this group are the authors who see power as essentially derived from the capacity of certain actors to mobilize a plurality of other actors in order to obtain consensus towards desired policies. Part of this tradition is associated with the so called “producer group politics”. For instance, Gourevitch (1986) argued that policy patterns are explained by policy coalitions that are constituted in times of crisis and then remain more or less stable in “good times”. Such coalitions entailed, according to the author, various degrees of alliances between labour and different segments of capital. The power levers they used were identified with both the instruments of democratic politics and the instruments related to the structural position of business in capitalist relations.

I consider relevant to include in this group also the long tradition of studies on corporatism which, especially focused on continental Europe and specifically on Germany, describe the process of policymaking in countries with strong organizations of interest representation.

According to Katzenstein (1989), the room for policy discretion in the German corporatist arrangement has been strongly limited both by external factors and by internal factors related to political decentralization and the presence of strong bodies of self-government by economic and social actors. This inherent “weakness” of the German state makes it, according to Katzenstein, a “semi-sovereign state”. According to Streeck (2003), this corporatist arrangement was already in crisis in the 1980s, when business and labour organizations started losing their coordinating capacity, while the state remained as weak as it was in the corporatist period. In this respect, Visser (2005) also argued that the fact that the government may have the will to bring social partners at the bargaining table does not mean that this attempt will be successful, since the government may be weak to begin with. More recent work has shown the risks that corporatist arrangements carry when they are captive of political institutions and when they are delegated specific policy functions (Di Carlo et al., 2024).

Partially inspired by the producer group perspective, Baccaro and Pontusson (2022) argue that growth coalitions form around certain sectoral interests, overwhelmingly driven by corporate actors, but also co-opting parts of labour. As in the traditional producer group politics, the main driver of aggregation here is economic interests, although with different shades compared to the original Gourevitch approach. To begin with, business plays here the leading role, not only in forming and brokering coalitions, but also in reinforcing the dominance of its own economic policy paradigm by means of ideologically projecting its interest as the “common interest”. Second, there is here a connection between the structural element, the economic growth model (specifically the main drivers of aggregate demand), and the power of business to have privileged access to decision-making and thus to obtain the desired policy outcomes. Ultimately, this also implies that, even with changing ideas, the range of coalitions that are viable is also constrained by the “hard” structural element. Baccaro and Pontusson (2016; 2019) thus suggest the existence of “core sectors” whose power stems from their role as drivers for general economic growth.

Another family of power-based explanations encompasses those emphasizing the structural power of business, defined as “[t]he ways in which large companies and capital holders (...) gain influence over politics without necessarily trying to, because of the way they are built into the process of economic growth” (Culpepper, 2015: p. 405). This conception dates back at least to Fred Block, who criticized instrumentalist accounts of the state in favour of explanations that stressed attempts by state managers to “[a]chieve some consciousness of what is necessary to maintain the viability of the social order” (Block, 1977: p. 27). It is important to point out that this family of explanations is not necessarily mutually exclusive with the previously described approaches. Generally considered, however, structural power scholars were interested overwhelmingly in the power of business per se, rather than in the conflicting interests between different fractions of business. More recently, Culpepper (2021) argued that the most recent period has been featured by a rise in importance of individual corporations, rather than business as a collective actor, as centres of structural power, which also affects their capacity to frame the broader public debate. Perhaps due to the fact that it started developing in the years close to the 2008-2009 financial crisis, structural power research has mostly been concerned with the financial sector. As previously mentioned, Culpepper and Reinke (2014) point to differences in the degree of dependence of private banks on the domestic market in order to explain different policy outcomes in banking regulation. More recently, Braun (2022) argued that the rise of asset manager capitalism has led to a slow fading of the “exit structural power” in favour of a “control-based power” of finance, whereby asset manager finance holds structural power by means its ownership relationship vis-à-vis the private industrial sector.

In the literature, structural power propositions usually stand in opposition to those stressing the role of instrumental power, namely the ability of business “[t]o staff governments with business supporters and to exert direct influence on government decision makers through campaign contributions and lobbying efforts” (Hacker & Pierson, 2002: p. 280). While structural power is based on the fact that policymakers

would take the interest of business into account without the need for business to mobilize, instrumentalist explanations require instead an “activist” business. An exemplary study is the Hacker and Pierson (2010) account regarding the rise of inequitable tax, labour and financial policies in the United States, where strong lobbying efforts are deemed as central in determining final outcomes.

More recent literature applies the concept of infrastructural power to describe a form of business power. Originally used to discuss power of the state as an autonomous agent from civil society (Mann, 1984), the concept has been more recently used to describe, especially in studies on the political economy of finance, a form of power that depends on occupying a structurally important position for the fulfilling of certain fundamental functions. Differently from structural power, infrastructural power originates not from the position of the actor in an economic sense, but as part of the process of executing certain policy tasks.

For instance, Braun (2018) shows that “[w]hen state actors transact in financial markets for governance purposes they create infrastructural entanglements, which constitute a distinct source of financial-sector power. In the case at hand, repo and securitisation markets (...) provide the infrastructure through which the European Central Bank (ECB) implements its monetary policy. This entanglement makes central bankers, who seek to maximise their economic steering capacity, dependent on bankers, giving the latter infrastructural power” (Braun, 2018: p. 2).

Similarly, van der Heide (2024) argues that the need of governments to find finance on the capital markets to finance deficits makes so that dealer banks acquire a certain extent of infrastructural power, making them constituting actors of public debt markets.

An influential school of thought has stressed the role of ideas in mediating the influence of structural factors in the determination of policy outcomes. In particular, Blyth (2002) criticized literature on institutional change for being too focused on material conditions and thus conceptualizing material interests as being too static. Conversely, the author argues that, especially in periods of crisis, ideas provide blueprints for actors in order to define their interests, find diagnoses for the crisis and to build coalitions. In this respect, Blyth framework on the role of ideas is distinguished from the Gramscian role of ideology, in that Blyth stresses more the dynamic capacity of ideas to structure change, rather than only their function in consensus-building over time. Moreover, his framework should not be interpreted as giving an absolute causal primacy to ideas. Rather, ideas can influence the perception of material interests, and thus the overall interpretive framing of actors when taking decisions. Bell (2012) argued that ideas held by policymakers can be important in mediating or reducing the structural power of business. Taking the example of the financial crisis of 2007-2008 in the UK, Bell and Hindmoor (2015) show that the shock induced by the crisis disrupted the previous quite politics of banking regulation, dragging the issue to the realm of noisy politics. This has led to an ideational shift that led to policymakers to have a more confrontational stance towards the industry and thus to implement sweeping change such as stricter ring-fencing regulation.

Eventually, some scholars have stressed the role of economic state capacity in economic decision-making. For instance, Bakir (2015) shows the important role that state capacity, both administrative and institutional, played in shaping the bargaining power of the Turkish state vis-à-vis the Hyundai Motors Corporation. Turning to the financial sector, James and Quaglia (2019) detail the process through which the UK has built up state capacity after the financial crisis in order to reduce the information asymmetries vis-à-vis the banking industry, which in turn allowed the regulators to hold a better power position. A broad family of studies also inquire the independent role of central banks as “epistemic authorities”, namely communities which hold highly technical and specific knowledge, which they are able use for influencing political authorities (Wansleben, 2023).

As already stated, it would be incorrect to think of the previously exposed approaches as necessarily competing explanations. Scholars who stress the role of ideas also almost universally recognize the role of structure, and scholars focused on structural power do not deny that instrumental power has also been very influential. Moreover, the fit of an approach rather than another may be highly dependent on the issue at hand. In this respect, the literature on central banking makes up an extreme example of a case where the highly technical nature of the policy field makes the government highly reliant on the epistemic communities of central bankers, at least for what concerns monetary policy. Conversely, the field of industrial relations was never found to rely on epistemic communities of that kind, with a much more prominent role of producer groups.

For what concerns the present work, I considered the growth model approach to provide the closest analytical lens to my general premises. In fact, it is useful to recall that this work moves from the tensions inherent to changing global phases of capitalism, and more specifically shifts in the economic geography of the production and consumption of goods.

In this respect, the growth model perspective provides a particularly useful connecting device between the global dynamics previously described and their unfolding at the national level. Drivers of economic growth are strongly dependent on the international positioning of an economy within the global system of production and consumption. The authors recognize this interdependency, in that they argue that *“[g]rowth is not a variable determined simply by the internal dynamics of national economies. Rather, it depends critically upon the (national) unit’s place in the global system and how the unit’s growth strategy is linked to the growth strategies of other units”* (Baccaro et al., 2022: p. 21).

Roughly stated, an economy strongly reliant on export as a growth driver, produces more “value” than it consumes which, at the global level, it means that other economies consume more than they produce. This relational nature of demand implies that the productive structures of different countries should also be structurally different. Reliance on export is most typically associated with a certain development manufacturing, commodities or high-end services. Drawing from the regulation school theory, Baccaro and Pontusson (2019) call this a *productivity regime*.

By referring to demand and productivity regimes, growth model theory stands out as a potentially powerful instrument to understand the macroeconomic constraints within which actors take policy decisions and elaborate their policy preferences.

The agency provided to actors is conceptualized by growth model theory by referring to “growth strategies”, namely a “[s]et of policies to generate growth and as such represents a deliberate intervention in the economy” (Baccaro et al., 2022: p. 12). More specifically, Hassel and Palier (2021) define growth strategies as “[a] (relatively coherent) series of decisions and reforms, taken by either governments or producers’ groups (economic and social actors) in order to boost growth and stimulate job creation in a specific nation, and the rationale for these decisions.” (Hassel & Palier, 2021: p. 21).

What these two conceptions of a growth strategy share is their focus on intentionality. Differently from the Hassel and Palier definition, however, I will here more specifically focus on the state as the factual locus of such a strategic behaviour. A series of reasons motivate this choice.

First, in terms of policy instruments, the capacity of the state to coordinate and mobilize resources cannot be equated with that of social partners or even of producer groups. Even in corporatist settings, as previously discussed, the logical consequence of the erosion of corporatist institutions over time is their further decline in capacity to act as strategic planners. Clearly, the point can be made that states also have different capacities to implement strategies, as the literature on German corporatism has widely shown. However, the coercive power of the state is unrivalled by any other actor and, factually actors extensively try to influence state policy even while engaging in bipartite forms of concertation.

Second, if we assume that social partners and actors are interested in their own constituencies, as the literature on dualization repeatedly shows (Rueda, 2007; Thelen, 2014), then it is hard to discuss about a “growth strategy”. Although, as insightfully shown by Thelen (2021), social partners and producer groups can play a very important role in setting up the strategies of adaptation of different political economies towards new segments, this kind of planning is the effect of a self-interested strategy resembling those of private companies. Policies usually follow suit. In this sense, these are adaptation strategies but not growth strategies, in that their purpose is not to pursue overall economic growth, but rather to facilitate specific (sectoral) interests.

Third, this exclusive consideration for the strategic courses of action of the state allows to distinguish between the state and the social groups who try to influence state decisions. Since what is of interest for the present work is the determinants leading to final policy outcomes, discriminating between preferences of social actors and preferences of the policy-makers is fundamental. This would ideally help overcome a limitation of the current literature on producer groups, which often depicts the state as simply following suit.

It should be specified that the state is far from necessarily acting as a unitary actor, and final policies are the process of dynamics within the state machine as, among others, the literature on central banks shows

(Wansleben, 2023). The state, and even the government, is thus not a single unitary brain, but there is an interactive process whereby elected politicians and technocratic and administrative bodies carry reciprocal influence (Clift, 2023; Locatelli, 2024).

This leads to an analytical problem, namely that the origins of decisions are difficult to track, since the policy process is defined by multiple phases involving different agents. A traditional handbook view of policy making distinguishes indeed between five phases of the policy cycle: agenda setting, policy formulation, decision-making, policy implementation and policy evaluation (Howlett & Giest, 2015).

For this reason, in the course of the following narrative, I will try to distinguish, whenever possible and whenever the empirics I gathered allow it, between initial projects and the final forms they take and, in particular, to the factors contributing to those final forms. However, it should be stated clearly that the outcomes considered in this study are the industrial policy courses of action per-se, and not their failure of success in economic terms. Rather, the failures or successes considered here are in the establishment of such industrial policy programs in the first place. Problems of implementation will only marginally be considered.

2.3) Where to intervene and how to intervene? The main argument and hypotheses

After the previous sections helped familiarize with the overall theoretical paradigms adopted in this study, this section will be dedicated to turn the main argument into more specific expectations.

As previously stated, the new changing competitive field in global capitalism has led governments to realize two urgencies. On the one hand, the urgency to intervene in order to maintain the competitive position of the domestic economy in the global order. On the other hand, the urgency to intervene to maintain the embeddedness of economic actors in the domestic community. It is in this overall context that industrial policy decisions are framed.

The question is then which sort of “industrial policy” we are discussing. In this respect, the traditional distinction between “horizontal” and “vertical” industrial policy is too fuzzy. This appears all the more clear when considering the heterogeneity of the measures that go under the label of “vertical” industrial policy, spanning from the aid to specific players to maintain the occupational levels, to the support of regional clusters. I here thus introduce a further distinction in types of industrial policy, namely that between “*strategic*” and “*compensatory*” industrial policy. By “strategic industrial policy”, I here mean the enactment of policy measures that are embedded in larger plans for the relaunch of specific economic sectors. This form of industrial policy is thus inherently vertical, but such verticality also comes in a broader structured strategic vision of the sectoral development as a whole. For instance, the provision of subsidies to a certain carmaker is certainly a form of vertical industrial policy, but it is not strategic,

if such subsidies are compensatory of profit losses and not framed in a plan for the strategic repositioning *of the whole sector* in the global competitive field.

This thus excludes forms of industrial policy that are simply “corporate welfare”, namely the provision of benefits to industrial players or even whole sectors with little-to-no conditionality (Bulfone et al., 2023). Such forms are defined here as “compensatory industrial policy”, namely industrial policy initiatives where the main aim is to subsidize industrial players in order to keep them afloat and guarantee the maintenance of occupational levels.

In this respect, the only feature that distinguishes “compensatory industrial policy” from “corporate welfare” is the fact that there are forms of subsidies without conditionality that are embedded in broader industrial plans. For instance, the several subsidization plans for stimulating demand for new motor vehicles (e.g. eco-bonuses, car scrapping incentives, etc.) are indirect forms of vertical corporate welfare, but they may not be simply “compensatory” if they are part of broader plans.

The distinction between “strategic” and “compensatory” is thus largely one of intentions and has to be evaluated according to the overall context where a specific policy is adopted.

It will be in particular this “strategic” capacity or will of the government that will be of interest to the main argument here.

According to Zysman, the first condition that has to be met by a government willing to promote or shape industrial change is to “[b]e able to have its own view on where industry should be going, which should emerge from its own definition of public purposes and its own interpretation of industry dynamics” (Zysman, 1983: pp. 85-86). The fact that the government may have an idea regarding the needs of the industry and, above all, which industries should be promoted, is thus non-trivial.

It was argued earlier that the push to export for a company means a tendency to internationalize and thus to scale up. I argue that, in economies that are particularly export-dependent, thus where the aggregate competitive strategies of businesses make so that the economy is more strongly dependent on foreign demand, two effects should be expected. First, export-oriented sectors would occupy a more central role in economic policy. Second, companies, and especially larger corporations, become more internationalized and thus increase in scale.

These two structural conditions, sectoral specialization and the presence of very large players, affect in turn the way in which governments and other policy stakeholders think about industrial policy problems. On the one hand, it will be easier to identify the sectors of interest if there are sectors that are structurally driving aggregate demand and that are thus the main “earners of the economy”. On the other hand, the presence of large players of systemic importance provides a proxy, or at least a shortcut, for the government to understand the needs of a specific sectors. Moreover, large companies also tend to be, for historical legacies, large employers also in their domestic economies, with important consequences

for the political salience of restructuring programs. Furthermore, large company size may also come with higher coordination capacity when designing policies, since large players also have higher organizational and financial resources to be credible partners and coordinate the suppliers.

The first argument I make is thus that countries featured by higher sectoral specialization and large players are more likely to engage in vertical *strategic* industrial policy than countries that have more heterogenous industrial structures. Thus:

H₁: countries featured by higher sectoral specialization *and* large players are more likely to engage in vertical strategic industrial policy than countries that have more heterogenous industrial structures.

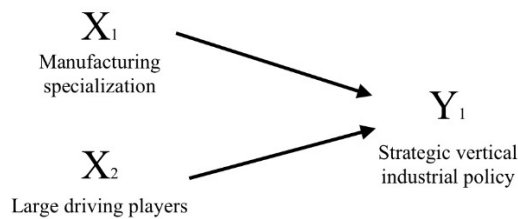


Figure 2 Hypothesis 1

In this way, the structural element (core sectors and large players) provides a constrain to the rise of “[c]ognitive conflicts over the interpretation of changing economic conditions and the efficacy of specific policy instruments” (Scharpf, 1991: p. 14).

A competing hypothesis which can be elaborated is that, instead of being a liability for industrial policy plans, the lack of sectoral specialization may instead be an enabler. For instance, in her Dutch case study, Thelen (2021) shows that it was right the vacuum left by the collapse of Dutch manufacturing that created an important enabling condition for the state to have better room to engineer a new growth regime. However, functional to this development is also the emergence of a powerful “alternative” sector which would provide at least some guidance to economic policy making. In the Dutch case, this was the financial service sector. Moreover, as shown by Katzenstein (1985), industrial policy in small countries follows a proper logic, since the higher dependence, and relatively scarce resources compared to larger countries, makes so that these countries will adopt policies easing adaptation, rather than hindering change.

The second aspect of interest is the consequences that the stronger push for internationalization in export-oriented countries has for the relationship between the state and large corporations. The relevance of studying this aspect stems from the first hypothesis, namely that the likelihood to undertake strategic industrial policy plans and actions goes along with the presence of large players. More specifically, I argue that the internationalization process that has accompanied the creation of these large players has led to a further strengthening of the structural power of large industrial corporations vis-à-vis the state.

Made simple: the government has more to lose from industrial disinvestment than the industry has to lose from breaking the relationship with the government. For instance, certain forms of domestic demand stimulation will play a larger role in bargaining with a corporation if the domestic market occupies a larger share of the corporations' total revenues. This factor, in turn, decreases state capacity to involve industrial players in industrial policy goals, and tends to skew the incentives towards a lack of conditionality. Therefore, the second hypothesis reads as follows:

H₂: The further internationalization of the market of reference and of the productive capacities of medium and large corporations makes the state less capable of intervening in industrial policy.

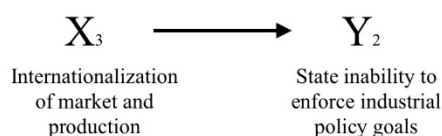


Figure 3 Hypothesis 2

The process of loss in state capacity during the neoliberal period has further exacerbated state weakness. In this respect, I adhere to Gabor (2023) idea that enforcing conditionality requires remarkable state capacity and that such capacity has been considerably weakened by the weakening of the state machine in the phase of the “consolidation state” when, especially in Europe, countries have engaged in an abatement of the expensive state machine inherited from the Keynesian period (Streeck, 2014). If, following Shonfield (1969), there has been a process of “learning” by the state in managing the economy over the Post-WWII period, this process has thus been reverted in the era of neoliberalism.

The state is thus trapped between the need to act and the scarce capacity to do so. At this point, the state may react in two ways. One option is to attempt more coercive policy forms, by forcing capital to “stay embedded”, such as direct shareholding or stronger forms of conditionality (e.g. local content quotas). A second option is to engage in a competitive race in order to raise the attractiveness of the domestic economy vis-à-vis other possible production locations for economic players. This implies a wide and expensive policy of subsidization where as little conditionality as possible is attached.

Although both answers are possible, I hypothesize that coercive forms are likely to increasingly take the upper hand, since, in the current phase of global capitalism, subsidization policies would imply a mobilization of financial firepower that would make them cost-inefficient. Therefore, I propose a sub-hypothesis (H_{2.1}):

H_{2.1}: The loss in state bargaining power due to the disembedding of corporations from their home economy leads to more direct and coercive forms of industrial policy being re-instated.

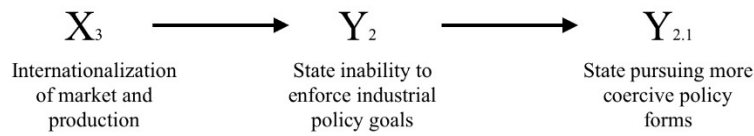


Figure 4 Hypothesis 2.1

Figure 4 summarizes the whole set of causal connections hypothesized by the theoretical apparatus structured here. Export-led models of economic growth influence manufacturing specialization and carry a strong drive to internationalization. Internationalization, in turn, negatively affects state ability to enforce industrial policy goals, which then leads the state to recurring to more coercive tools of industrial policy. Internationalization also leads to the scaling up of industrial players which makes up the condition, together with manufacturing specialization, for policymakers to have a straightforward guidance in taking industrial policy decisions.

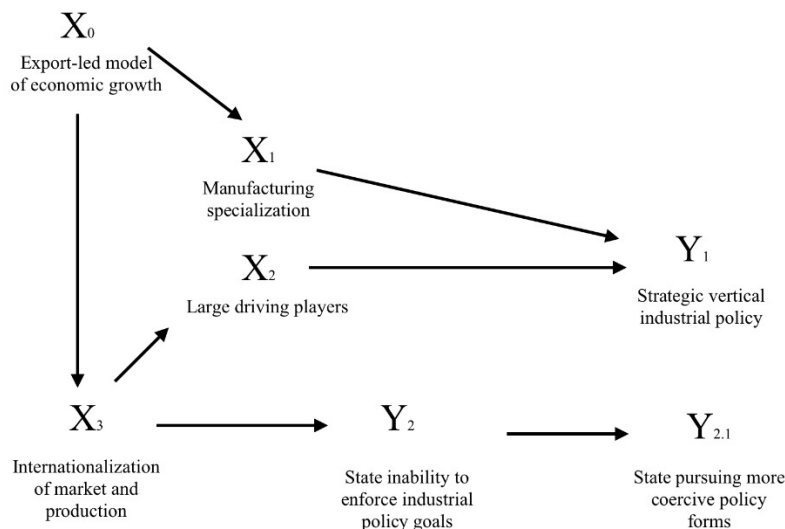


Figure 5 Causal connections in the overall argument

By drawing this connection between macro-economic and structural features of an economy (core sectors, large players) and the different strategic industrial policy paths I aim to contribute to connecting the literatures on growth models with the industrial policy literature, by highlighting how growth models count in that they help consolidate specific actors who influence and aid policymaking.

Despite using the language of hypotheses, the way I use theory here is more as a guide. Real world phenomena are much more multifaceted, as I will try to show and, as Scharpf brilliantly said: “[s]ocial scientists dealing with complex historical developments must take explanations where they find them

(...) in many situations the best one can hope to achieve is narrative explanations” (Scharpf, 1991: p. XX)

2.4) Research design and case selection

Since my investigation does not start with a pre-defined outcome, which instead has to be discovered through the research process, I deemed a most similar system design to be the best option (Przeworski & Teune, 1970). Clearly, it is hardly possible to find, in the social world, two perfectly identical cases and the best the researcher can do is often to minimize the sources of variability that risk leading to spurious correlations or which make comparison unworkable.

For this reason, the final decision on the cases to analyse fell on Italy and Germany, since the two cases differed in the variables of interest, namely the presence of established core sectors, as well as established demand drivers. At the same time, the two countries are relatively similar in terms of the variables I considered important to control for.

I will divide my explanation on the criteria for the case selection into three parts. First, I will detail the variables that I have deemed most important to be controlled for, since fundamental differences in them would have made the comparison scarcely informative. Second, I will highlight which variables were chosen to vary as independent variables which are expected to have an effect on the outcomes observed. Third, I will highlight important variables where the two countries differ and which can influence outcomes and lead to observe spurious correlations. I then detail how I attempted to circumvent the limits connected with these “unwanted variations”. Table 1 provides a first overview of the variables of relevance.

	Italy	Germany
Financial System	Bank-based / Credit-based	Bank-based / Credit based
Public debt (2018) (%GDP) (a)	134.4%	61.2%
Sovereign credit rating (S&P, 2024)	BBB	AAA
Main development bank’s assets (2017) (% GDP) (b)	24.41%	14.39%
Manufacturing as % of GDP (2023) (c)	15%	19%
Pre-2008 growth model (d)	Domestic demand-led	Very export-led
Post-2008 growth model (d)	Very export-led	Very export-led
VoC classifications (e)	MME / SME	CME
Core macro-sectors (f)	Low-End services	High-End Manufacturing

a World Bank (2024)

b Mertens et al. (2021)
 c World Bank (2024)
 d Based on Baccaro & Hadziabdic (2022)
 e Based on Hall & Soskice (2001) and Schmidt (2003)
 f Based on Baccaro & Hadziabdic (forthcoming)
Table 1: Case selection: the main variables.

It is thus useful to begin by detailing the variables where I have tried to minimize differences between the two cases selected.

To begin with, the type of financial system is a variable of fundamental importance when evaluating different forms of state finance. In fact, following Zysman (1983) the financial system influences considerably the extent to which the state is able to control the allocation of resources.

Both Germany and Italy have been labelled as traditionally bank-based systems, although the liberalization process of the 1990s smoothened this path dependency (Deeg, 2005; Cioffi & Höpner, 2006). Perhaps more fundamentally, both Italy and Germany count as moderately or weakly financialized countries, although housing financialization has been decisively more pronounced in Italy than in Germany (Mertens, 2015; Ban & Helgadóttir, 2022; Stockhammer & Kohler, 2020). In the segment of business lending, both Italy and Germany rely comparatively more on bank credit, as well as to forms of relationship lending (Stolfi, 2018). However, the segmentation of the financial system of the two countries is fundamentally different. The Italian banking system has undergone a process of privatization and consolidation in the 1990s which resulted in its contemporary form of a banking system segmented between the two largest commercial banks (Unicredit and Intesa San Paolo) and a series of cooperative banks and smaller, regionally-organized players. In general, the tendency has been to promote consolidation in Italian banking, by trying to facilitate the expansion of the two largest national players, in a logic of creating international champions (Bulfone, 2017a). The German system is instead segmented into three pillars (large commercial banks, municipal banks and cooperative banks) whose division is much neater. However, I deem this difference in structure to be of secondary importance for the purpose of this dissertation, since the relationship between state finance and private finance is not fundamentally altered by it. Rather, the liberalization process and the advent of market-based banking has perhaps made the two systems even more similar, especially after the reform of the German Sparkassen and Landesbanken in Germany (Hardie & Howarth, 2013; Seikel, 2013; Stolfi, 2018).

Since this book deals primarily with the use of state finance for industrial development, differences between the development banks of the two countries, CDP for Italy and the KfW for Germany, cannot be neglected. The reason for which controlling for this difference is important is that national development banks have increasingly become one of the main instruments employed for state finance, but several countries have only recently started a process of capacity build-up for these institutions. Here thus the intention was to minimize variation, although the idiosyncrasies of individual countries make it very hard to find fully comparable institutions. In this overall context, the German KfW and Italian

CDP make up for a very similar case comparison, in that they are among the OECD national development banks with the largest assets in relation to the national GDP (Mertens et al., 2021). Moreover, the development banks of both countries are old-dated institutions, which, as shown by the literature on development banks, matters in terms of skills and power allowing to navigate state aid regulation (Volberding, 2021). The fundamental difference between the Italian and German cases lies in the fact that, while the German KfW has functioned overwhelmingly through on-lending, namely by providing a plafond to the private banking system, the Italian CDP has relied more on direct lending. In the research process, I have thus tried to identify whether this difference could have influenced the outcomes I was analysing. As will be shown, there is scarce evidence that this variation in form may have affected the overall picture.

A further commonality between Italy and Germany is the high share of manufacturing on the overall GDP. Although in Germany the percentage of 19% of manufacturing-to-GDP ratio is particularly high, the Italian 15% also figures as one of the highest for large OECD economies. Controlling for this aspect is important, since it allows to phase out the scenario in which one of the countries would not engage in active industrial policy simply because manufacturing is structurally lower in relation to GDP.

Both Italy and Germany operate within the competitive and monetary frame of the European Union and are both in the Eurozone. This allows to control for fundamental differences in terms of competition law, trade policy, monetary policy and industry standard regulation that inevitably arise when comparing countries not sharing the same regulatory framework. This is especially true in terms of trade policy. Since both countries adhere to the tariff regime of the single market, it is easier to focus on the net effect of state finance, since national level politics does not have discretion in enacting protection of national players through trade instruments.

Financial system, large and old public banking institutions, high importance of manufacturing and adhering to the same trade and competition policy framework have thus been chosen as priority variables whose variation should be minimized.

Conversely, my case selection has tried to ensure variation in both demand drivers and core sectors between the two countries studied. The way in which I have done this, however, differs between demand drivers and core sectors.

With respect to demand drivers, I wanted to compare a country with established and lasting demand drivers, with a country which has instead undergone change. As previously stated, stability of a growth model over time is deemed to be important, since it establishes the cognitive framework and the actors that support the stabilization of the model itself.

Taxonomies of growth models can change remarkably according to the authors operationalizing them (e.g. Baccaro & Hadziabdic, 2023; Hein et al., 2020). In this dissertation, the operationalization of growth models that will be used is the one proposed by Baccaro and Hadziabdic (2023), since the use

of input-output tables allows to adjust for imports according to their destination (consumption or intermediate goods) and thus to provide a more accurate depiction of demand drivers.

In the overall literature, there has been a general consensus on the fact that Italy has shifted, after the 2008 crisis, from a growth model where growth was overwhelmingly driven by domestic demand, to a model where exports were the main driver. Nevertheless, the Italian case has also been considered as one where, rather than strong export performance, export-led growth simply reflected internal demand falling more than exports, especially after the policy of budget austerity. The overall picture is however one of stagnation. Conversely, Germany has been consistently classified as an export-led growth model, although with some signs of rebalancing after the financial crisis.

An obvious limit to this approach is that we observe variation in the Italian and German growth models mostly at the earlier point of analysis, before the 2009 crisis, to the extent that some authors even argue about a process of convergence (Notermans & Piattoni, 2019). There are two reasons for which this represents only a partial limitation.

To begin with, the interest for the demand drivers lies, for this work, in their stability over time, more than in their classification. Stability allows to certain core sectors to acquire established positions and for politicians to settle on ideas on how the economy works, thereby influencing their industrial policy interventions.

Second, countries whose growth model is radically different from the German model, differ also on variables that are more important to control. For instance, the United States and the UK, the usual cases contrasted to Germany in the growth model literature, differ radically in their financial systems, type and scope of their public banking, and manufacturing share of GDP.

This leads us to consider the more fundamental aspect of differences in sectors' heterogeneity between Italy and Germany. Following Baccaro and Hadziabdic (forthcoming), Italy and Germany differ fundamentally in their sectors driving economic growth between 1995-2019. While Germany has overwhelmingly relied on high-tech manufacturing as a macro sector, Italy has primarily relied on low-end services. Furthermore, the tables dividing by micro sector show a dominant role for automotive and machinery in Germany, while in Italy the positive contributions to demand came from services such as healthcare and real estate. With respect to manufacturing, Italy displays a particularly interesting pattern due to the relatively sparse nature of the manufacturing sectors impacting positively on aggregate demand. In manufacturing, there are no sectors that drive growth as much as automotive and machinery in Germany. The largest contribution of an individual micro-sector is a negative one and specifically from the textile sector.

Looking at the composition of German and Italian exports in the year of beginning of the analysis can help further understand the differences in terms of economic structure between the two countries.

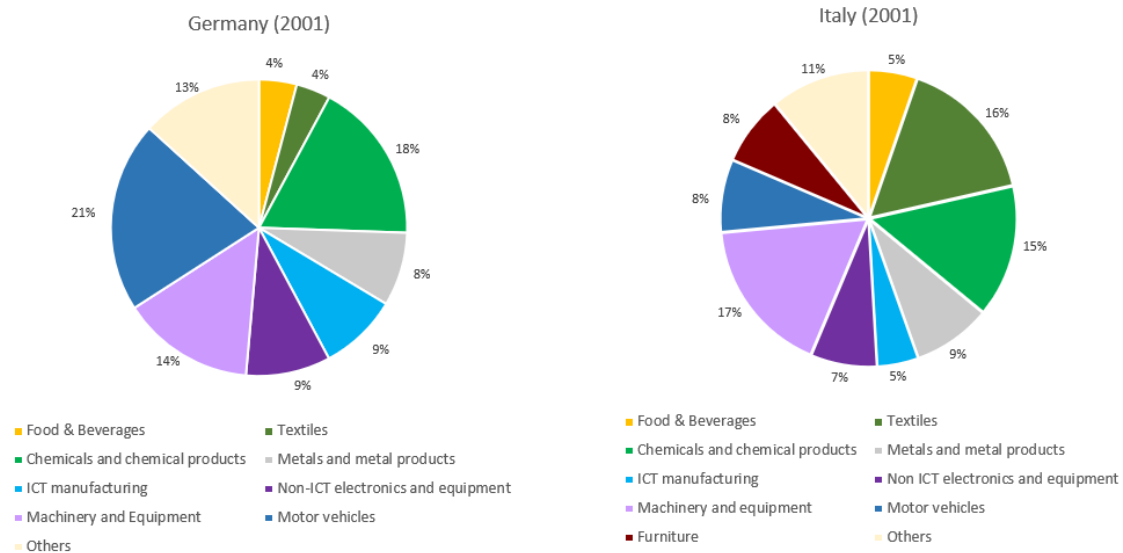


Figure 6 Share of sectoral exports on total manufacturing exports (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

It can be noticed that in Germany motor vehicles alone accounted for 21% of the total manufacturing exports, closely followed by the chemical sector. In Italy, the structure of exports appears to be less concentrated and, most importantly, low-tech manufacturing sectors like textiles and furniture account for a considerably large share of total exports.

Therefore, both when considering sectors driving aggregate demand and main exporters, Italy and Germany display considerable differences. Both are manufacturing countries, but in the Italian case it is less clear which segments of manufacturing are the clearest drivers of growth.

To conclude the case selection, it is worth pointing out some differences between the two cases which are relevant but “tolerable” for the purpose of this analysis.

Differences in levels of public debt and credit rating, with the relative difference in spending capacity, are probably the most visible and impactful difference between the two. Industrial policy plans may not be pursued simply because of scarce financial resources. This limit is less considerable if taking into account two factors. On the one hand, off-balance sheet forms of investment and industrial policy have risen in importance over the last years (Lepont & Thiemann, 2024). On the other hand, there are timepoints in the period analyzed when budget constraints were more relaxed, for instance before the 2011 debt crisis and during the Covid temporary crisis framework. The solution that I implemented to rule out this budget constraint explanation was to investigate it empirically. Especially using interview data, I attempted to identify if and when the budget constraint was posing limits to industrial policy initiatives.

A second difference of relevance is in the categorization of the two countries in different varieties of capitalism, namely Germany in the CMEs and Italy in the MMEs or SMEs (Hall & Soskice, 2001;

Schmidt, 2003). The difference in classification is not so relevant per se, but rather as a proxy of different institutional arrangements that may influence if and how industrial policy is undertaken. It was detailed in the literature review how German corporatism makes up a specific arrangement, which does not find an equivalent in the Italian context. Following Katzenstein (1989), German corporatism could substantially challenge the capacity of the state to engage in industrial policy, since powerful actors can veto independent government initiatives. Following Streeck (2004; 2009), one could argue that these arrangements have become considerably weaker over time, but this nonetheless does not exclude the fact that the state may have remained a weak player. Conversely, Italy comes from a tradition of state-led development and extensive state ownership in industrial companies, together with weak corporatist institutions.

Eventually, this leads to the larger debate on whether supply side institutions or demand drivers are more important. The fact that export-led growth models often overlap with corporatist institutions does not help clarify this point only by means of a case selection. Therefore, I attempted to address the problem once again by refining the empirics and evaluating, both through interview and document data, how determinant were these institutional legacies in determining the final outcomes analyzed.

2.5) Countries and sectors

While the previous section has detailed the reasons for the country selection, I considered a general country level analysis to be insufficient, since it would not allow to appreciate the specific ways in which the overall change in the competitive conditions of global capitalism affected company strategies and the following reaction of industrial policy decisionmakers.

Therefore, I decided to develop the analysis along two directions. On the one hand, I will outline a broader analysis on how governments have employed or redeployed state finance and for which purposes. In doing so, I aim to give a general picture of how the government thought of industrial policy in a certain period and how the main industrial policy stakeholders reacted to such initiatives.

On the other hand, I selected some specific sectors and analyzed what kind of industrial policy approach, if any, was adopted for them. The main aim of the sectoral analysis is to show how the changing competitive conditions of global capitalism affected industrial sectors differently according to their capacity to avoid strong price competition. This, in turn, has led to different corporate adaptation strategies, as well as to different extents of calls for industrial policy by national stakeholders.

Tracing the economic performance and the demands of the industry will thus be a central part of this story, since it enables to show which problems the industry faced and whether these managed to trigger a government reaction.

Therefore, I selected the sectors of automotive, chemicals and steelmaking, due to their historical relevance and their relatively high importance in the two countries' manufacturing exports. In particular, these three sectors allow for an appreciable degree of variation in the complexity of the products, as well as in the type of price competition they undergo.

The automotive industry is a sector which is primarily focused on the production of final goods (motor vehicles) and the related intermediate parts. In both countries the sector has historically played an important role, although for different reasons. Germano (2012) showed how the automotive player FIAT played a central role, at least until the 1990s, as a national champion of reference for the Italian government and as a major coordinator in collective bargaining and industrial policy. Katzenstein (1989) highlighted how the sector economic importance in Germany was not paralleled by an equal tendency of the government to intervene during crisis times.

The chemical and steelmaking sectors allow to explore what happens as soon as we investigate sectors producing intermediate goods and that are less capable of segmenting their products on a technological basis and thus to charge higher prices for quality. The chemical sector is mixed, in that it is overwhelmingly placed as an intermediate sector, with some segments (e.g. personal hygiene products) dedicated to final consumers. Instead, Steelmaking is overwhelmingly producing intermediate goods for other industries, especially transport equipment, machinery and construction. This nonetheless, the strategic importance and employment intensity of steel have made it highly central in the industrialization policies of the previous century in both Italy and Germany, although, differently from Italy, Germany refrained from an extensive policy of subsidization during the steel crises of the 1970s-1980s (Ranieri & Romeo, 2014; Gieseck, 1995).

Eventually, I considered relevant to compare the main sectors I analyzed with two sort of “shadow cases”, namely sectors that I have explored less thoroughly but which can provide good cases to contrast with the main three industrial sectors.

The first is the construction industry, which enables to show what happens in a sector that is overwhelmingly dependent on the internal market and that is widely used in the growth model literature as one of the core sectors of consumption-led growth financed by debt (Reisenbichler & Wiedemann, 2022; Baccaro et al., 2022). Although neither Germany nor Italy have followed a “Spanish way” of fully fledged housing-led growth, the two cases still provide a certain degree of contrast, since Germany has stood out in the literature for its particularly repressed housing finance and low home ownership, whereas Italy is featured by high homeownership rates and attempts to mix policies of export competitiveness with some policies inspired by the Spanish approach (Kohl & Spielau, 2018; Mertens, 2015; Baccaro & Bulfone, 2022)

Another sector with which I have tried to make occasional comparisons in the book is the shipbuilding industry. The case of shipbuilding emerged rather inductively in the course of the research process as a

particularly good case to contrast the sectors already analyzed with a sector producing final goods and where the technological edge justifying higher pricing exhausted at an early point of analysis.

2.6) Research design and methods

The political science literature has provided a wide array of analytical approaches to structure the way in which data and theory interact in the process of analysis.

A prominent field of research design literature has developed the concept of “process tracing”, whereby, similarly to the historical method of inquiry, authors would pay special attention to the unfolding of the sequences of events in order to test the existence of specific causal mechanisms. I considered this to be a useful analytical approach because, although not fundamentally dissimilar from an historical narrative, provides a more structured relation between theory and empirics.

This is helped by the taxonomy proposed by Trampusch and Palier (2016), which has provided a more systematic categorization of forms of process tracing and, most importantly, placed them in a continuum between more inductive and deductive forms of it.

Among the options offered by this taxonomy, I considered the use of theory-guided process tracing (TGPT) as the most suitable analytical approach for this study.

Following Falletti (2016), theory-guided process tracing is constituted of the “[t]emporal and causal analysis of the sequences of events that constitute the process of interest” (Falletti, 2016: p. 457). More specifically, TGPT stresses the need to conceptualize the processes of interest with reference to previous theories, as I have done in the previous sections. The advantage of this analytical method is that it allows to use theory to structure the analysis, leaving at the same time open space for inductive reasoning from the data collected. Moreover, according to Falletti, TGPT is particularly suitable to be applied to comparative case studies, since comparisons allow to identify regularities in the emergence of patterns and sequences.

The case selection part, however, has highlighted how the potentially multifactorial nature of the phenomenon I am analyzing, and the many competing explanatory factors, require a step further from the mere temporal sequencing of events. The complex nature of the relationships explored here requires a specific attention in ensuring that the correlations may not be spurious and thus an evaluation of the evidence at hand vis-à-vis competing explanations.

For this reason, in line with a Bayesian perspective of process tracing, I have tried to analyze, and whenever possible to stress over the narrative, how the evidence at hand resonates with competing explanations and why I deemed the explanations I advanced as more powerful than the possible competing ones (Bennett, 2009).

2.6.1) Methods and limits

The methods used in my research are overwhelmingly qualitative, including interviews, document analysis and some descriptive statistics. I have made these different sources interact in a logic of “triangulation”, in order to understand how they converge in telling a different story and where the elements of complexity are (Jick, 1979).

I collected a total of 75 interviews for both my case studies, divided between 42 interviews for Germany and 33 for Italy.

The interviewees included experts, senior officials, politicians, bankers, and in general actors who had an inside knowledge on the phenomena discussed here. This was especially important with respect to state-backed financial institutions, since little is known regarding their internal functioning. The sense of recurring to interviews for this specific topic, in fact, is to obtain that kind of information regarding how political processes happen, which cannot be obtained simply by reading documents or reading the news. Interviews also allow to understand the thinking process of decisionmakers in the moment in which they have to take decisions, which only seldomly is spelled out in public, and which is central to the main goal of this work, namely understanding why certain adaptation strategies are undertaken.

In order to grant privacy to the interviewees I am not going into the details of the roles and positions covered by the participants. However, one of the limitations of my data is that I found it considerably more difficult to access political actors and experts within the Italian ministries than it was the case in Germany. I tried to compensate by involving a higher number of industry experts for the Italian case. The final result was broadly satisfactory and I managed eventually to obtain the information I needed in order to test my hypotheses.

The document analysis provided a good instrument to fill the many gaps that are inevitably left by an analysis solely based on interviews. In particular, it was easier to obtain from the documents a more systematic overview regarding specific demands from the industry (organizations or corporations) vis-à-vis policymakers. In this respect, I have found industry publications to provide an invaluable amount of information, both political and technical. Moreover, for state financial institutions and specific companies I carried out an analysis of their yearly financial reporting. This has gone particularly in-depth for state financial institutions. In fact, considering the scarce literature on specifically these institutions, I have looked at them in an inductive way, trying to extrapolate elements that may have been missing from my starting viewpoint.

A vast amount of newspaper articles was also used in order to trace not only the specific timing of some events but also the public stances taken by politicians and industrial leaders. I have come to realize how useful this kind of source is to provide additional elements that can validate or disprove a certain argument.

Eventually, a relatively rich amount of quantitative data has been used descriptively to show broader economic developments. The databases used are the OECD-STAN, the OECD Bi-Lateral Trade Data, the World Bank, Destatis and ISTAT. The main criterium to choose one or another was according to which one better caught the phenomenon that I wanted to analyze. Furthermore, I have collected a rich amount of quantitative data from financial statements of companies and from industry reports, especially when analyzing developments in the sub sectors. I am eventually indebted to Federchimica for having allowed me to access to rich database for the chemical sector both for Italy and at the global level.

2.7) Germany and Italy in Political Economy: an overview

Prior to delving into the empirical analysis of the Italian and German cases, I deemed appropriate to introduce the reader to the way in which these countries have been framed in the political economy literature. This section is thus dedicated to provide a very short overview of the political economy debate on these two countries, without delving too much into the historical introduction of the cases, which will be better extended in the dedicated empirical chapters.

Overall, it is considerable to notice how the literature has been patchy in covering industrial policy, with coverage varying according to the period. For instance, while the literature has more extensively covered the industrial policy approach of Germany in the latest period, due to the alleged “rebirth of industrial policy”, in earlier periods authors stressed more the “powerlessness” of the German state, mentioning industrial policy mostly as something that the state could not do. Conversely, comparatively little attention has been devoted to contemporary Italian industrial policy, whereas an extensive body of literature exists on the privatization period. In this respect, the aim of this work is to give a linear view of the developments in both countries over the last twenty years, which is currently missing.

2.7.1) From uncoordinated state ownership to strategic privatizations: the political economy of Italian industrial policy

In the early comparative capitalism literature, Italy appears overwhelmingly as a shadow case, and authors have often recognized a series of specificities which made the country particularly difficult to frame in specific schemes.

Gerschenkron (1962) observed that Italy, as a latecomer, engaged in forms of protectionism at the end of the 19th century. However, the author also pointed to the fact that Italy protected mostly the traditional branches of economic activity including grain, cotton, textiles and iron and steel. Therefore, according to the author, Italian protectionism did not promote the advent of industrialization in advanced sectors,

but has rather protected rent-seeking in the traditional sectors. More recently, some authors deemed this view to be misplaced, and it was shown how the later forms of Italian protectionism were factually aimed at promoting new strategic sectors such as the mechanical, steel and shipbuilding (Adler, 1995; Fortis & Carminati, 2016). Gerschenkron also observed that the Italian banking system mobilized capital for industrialization by emulating the organizational structure of German banking, although the Italian system allowed for a much narrower margin of freedom to banks compared to what seen in Germany or Austria.

It is however when analysing Italy in its Post-World War II configuration that authors struggle the most to frame the country in a specific category. On the one hand, Italy was featured by very extensive state ownership in the industrial economy, mostly as an involuntary consequence of state intervention during the Great Depression, when the government temporarily nationalized banks and, with them, the companies where these banks had ownership stakes. On the other hand, authors have in several instances pointed to the lack of a unitary coordination in the Italian state, which was often seen as too torn by particularistic interests.

Zysman (1983) argued that the structure of the Italian financial system was fairly similar to the French financial system due to its extensive public ownership of banks and its control over capital allocation. Nevertheless, the author also held the two systems to be fundamentally different on a critical point, namely the capacity of resource allocation, a field where the Italian system was poorly coordinated and divided by struggles between political factions inside the state.

Paying more attention to independent managers within the state structure, Shonfield (1969) pointed to the Italian specificity in the role of the Bank of Italy as a centralized “almighty” credit allocator, although he attributed to the bank an overall hostility to the idea of financial planning in a French-style industrial-political sense. Interestingly, Shonfield recognized that IRI managers were featured by a large degree of independence, which they saw as fulfilling a developmental mission.

“(...) the management of IRI viewed itself as the guardian of a number of the key sectors of modern industry, on whose efficiency the performance of the rest of the Italian economy would depend” (Shonfield, 1969: p. 186).

Moreover, Shonfield also highlighted the advantage of the very high degree of diversification of the IRI group, which allowed forms of important within-group coordination and internal procurement.¹⁰ However, the author did not recognize extensive planning capacity to Italian governments, consequently implying that the strategic locus and capacity was to be found in independent state managers.

¹⁰ Shonfield takes the example of the shipping companies, who were ready to accelerate their plans of fleet renewals in order to provide work for the shipyards in moments of downturn.

In light of the historical literature, I consider this vision questionable. A particularly relevant example in this respect is steelmaking, where plans such as the *Sinigaglia Plan* were politically relevant and specifically targeted at increasing steelmaking production, and were often concerted with FIAT and the exporting sectors (Ranieri & Romeo, 2014). Furthermore, the Bank of Italy was found to exert influence over credit policy also in the more “political” bodies of credit allocation (Lupi, 2022).

The complex system of state-backed industry and finance was eventually dismantled with the privatization waves of the 1990s. The period of privatizations attracted considerable attention by comparative scholars, who tried to show that, far from being a retreat of industrial policy, privatizations were instead a new way of pursuing industrial policy. The privatization process was thus subject of a vast body of analysis pointing to how governments have thought of privatizations strategically, trying to turn former state-owned conglomerates into international champions.

Bulfone (2017a) shows how the state supported national champions in the telecommunication, electricity and banking sectors. Particularly interesting is the case of the banking sector, where a synergy of efforts was found to exist between the Bank of Italy and the centre-left governments. The two actors converged on a model of “*sheltered consolidation*” aimed at supporting the expansion of selected players and sheltering them from foreign acquisitions. This led to the transformation of Intesa and Unicredit into large international banks able to compete on the European market. In the electricity sector, ENEL was only partially privatized and its expansion was promoted through diplomatic channels, regulatory instruments and sheltered consolidations. Eventually, Telecom Italia represents a case of failure due to its rapid privatization which was not compensated by a stable block of private holders, which eventually made the company easy target for financial operations. The author also stressed the importance of political alignment between the government and the company managers in influencing the outcomes of these strategies.

Specifically focussing on the banking sector, Deeg (2012) defined the policy approach adopted by Italy as Liberal Economic Nationalism, according to which the state actively tries, especially through regulatory means, to craft internationally competitive champions in the sector.

Studying the relationship between family firms and privatizations, Colli et al. (2013) argue that the privatization process indirectly contributed to the strengthening of Italian family firms, who, in many cases, acquired privatized assets and filled some gaps left by the disappearance of state-owned enterprises. Inspired by VoC and international business literature, Colli et al. (2014) observed that the success of strategies supporting the internationalization of domestic players were affected by the type of domestic capitalism. In the Italian case, the authors argue that, despite being a form of state-directed capitalism, the state did not manage to ensure, especially in the Telecom Italia case, policy consistency over time, alternating interventionist and non-interventionist approaches.

Further studies highlighted how the financial crisis and the liberalization reforms of the 1990s and 2000s impacted the Italian system of corporate governance, traditionally featured by strong family blockholders. Corporate governance emerges here as a contended policy field, where corporate actors manage to dynamically adapt to changing conditions and adopt a series of strategies which can be outward, namely oriented towards external competitiveness, or inwards, oriented towards consolidating the position within the domestic market. Bulfone (2015; 2017b) shows how liberalizing reforms in the Italian system did not manage to erode the power of blockholders, who instead managed to exploit them at their advantage and maintain their established position. The financial crisis, however, marked a critical juncture due to the blow it delivered to the financial resources of family blockholders. As a consequence, traditional powerful players of the Italian system either had to sell their shareholdings or were acquired by foreign players. The important part of this story is the considerable, although weakened, capacity of Italian corporate players to mobilize resources to act strategically and coordinate with each other in moments of crisis, in order to consolidate their position in the system. Governments even facilitated the system of family blockholdings by granting blockholders double voting rights, thereby breaking from the previous tradition of corporate governance liberalization (Bulfone, 2017b).

The problem of policy inconsistency is also evoked by Di Giulio (2018) in relation to the government management of the state-owned airline “Alitalia”. The author points to policy inconsistency, especially in timing between privatization and regulatory policy, as a factor influencing the unsuccessful performance of the company. Moreover, political short-termism made so that an industrial perspective was missing in the relaunch of the corporation.

Inspired by a VoC approach, Simoni (2019) argues that the reforms of the 1990s brought to a process of institutional hybridization, which was associated with its weaker economic performances. The author argues that Italy was featured by a model of strategic coordination which, until the 1990s made so that the state and local institutions provided “supplementary underpinnings” compensating for an imperfect institutional design. From this perspective, the extensive system of SOEs and credit allocation compensated for the lack of institutional arrangements such as relationship lending, which made strategic credit allocation possible in Germany. Through the reform of the financial system and the privatizations, the coordinating role of the state dissolved, thereby mining its function as a fixer of the dysfunctionalities of the Italian institutional arrangement. Moreover, the reform attempts of the period of liberalizations were patchwork, not leading to a new supporting mechanism.

In the context of the recent rediscovery of national development banks, Bulfone and Di Carlo (2021) trace the story of how the Italian government has rediscovered the state-owned bank *Cassa Depositi e Prestiti* (CDP) as a promotional finance tool which nevertheless sticks to some market-adhering logics. Most importantly this provides the government with an instrument to counter potential credit crunches by using off-balance sheet lending. In fact, the transformation of CDP into a market unit made so that

CDP assets would be calculated outside the perimeter of the public debt. Furthermore, the bank has increasingly been transformed into a holding of state-owned enterprises that were “sold” by the state to the bank.

Tracing a recent history of the Italian automotive sector, Germano (2012) shows the process whereby FIAT has gradually acquired structural power vis-à-vis the Italian state and severed its connections with the Italian political establishment. After a long period of mutual influence between governments and FIAT, the changing party system in the 1990s determined a first loosening of the relationship between the two. More fundamentally, the integration of Italy into the single market and the high Italian public debt made so that governments would be less willing and less able to provide support as they did the past. This process of emancipation from the state led the company to a forced strategy of internationalization, which then increased its structural power vis-à-vis the state. Importantly, the author also argues that the higher interest of the Berlusconi government in addressing SMEs, rather than the large industrial players, constituted a reason for political redirection of attention away from FIAT.

Adopting a more normative and economics-oriented perspective, Lucchese et al. (2016) argue that the fast privatization of state-owned enterprises and the abandoning of industrial policy had a negative influence on Italian subsequent development in several respects, among which the reduced presence in high-tech sectors, the reduction of R&D by the privatized firms and the failure in creating new large firms out of privatization.

Eventually, some studies observe the positive role that industrial policy at the regional (sub-national) level has had in adapting to the changing conditions of global competition, filling, at least to a certain extent, the gaps left by relatively poor national level policy (Bianchi & Labory, 2011).

Overall, the studies reviewed here have provided an important overview of the development of the industrial policy path of Italy. However, especially the most recent literature has tended to be compartmentalised in specific sectors or companies, rather assessing the overall model. To a certain extent, this is a natural result of the high sectoral specificity of industrial policy, whose instruments and dynamics tend to change according to the sector. Nevertheless, understanding the motives behind certain government courses of action can provide a further angle from which one can look at the sectoral or company-specific policies above observed. In this respect, the present work engages with the existing literature on Italian industrial policy by providing this bird’s eye perspective and by understanding the logic behind the adoption of different policy paths.

2.7.2) Industrial policy in a weak state: Germany and the strength of organized interests

The very specific features of the German model of coordinated capitalism have made it a particularly central case study in comparative capitalism, and part of what will be recounted here will be a repetition of part of the literature reviewed above.

The early comparative capitalism literature was specifically interested in the connection between German banks and private business, which took the form of both an economic and a power relation. Gerschenkron (1962) saw the German model as featured by oligopolistic banks holding control over credit decisions, and who decisively intervened in the industrial affairs of the companies where they held shares. This arrangement was based on industrial companies' need to borrow money, which in turn was strongly connected with the early phase of German industrialization. According to Gerschenkron, once companies would be able to self-finance by retained earnings, the grip of banks on the system would also start faltering.

Political economists have been however overwhelmingly concerned with the shape taken by the German state emerging after the defeat in the Second World War. Almost unanimously, the early comparative capitalism literature identified the Post-War German state as being relatively weak by design.

The account of Shonfield (1969) reported the image of a Germany which was considerably weakened by the decision taken regarding the structuring of the state after the war defeat. The state emerging from the war had, also for political will of the Allies, considerably little power to directly intervene in the management of the economy and even, for some time, to extract revenues for its own budget. In such a context, even a state-backed bank like the KfW could not fully work as an extension of the will of the government, since by statute private banks held considerable influence in it by means of their position in the commanding heights. The capacity to intervene in the economy was thus subject to a process of gradual learning by the German state which entered the new phase of deeper state management in the economy less equipped than its European competitors.

The "weakness" of the German state led Katzenstein (1989) to the definition of Germany as a "semi-sovereign state". This term poses special stress on the scarce capacity of the German state to engage in direct industrial policy interventions due to multiple factors, among which the decentralized structure of the state, the strength of organized interests, preference for consensus-based decision making and a Post-War ideological commitment to economic liberalism. The particularly interesting part of Katzenstein's work is the detail in which he analyses specific conflicts in which political temptations for more direct forms of state-led coordination systematically hit the wall of organized interests and institutional constraints.

An important feature of this "weak" German state is its aversion to engaging in bailouts and rescuing operations of declining industries. Zysman (1983) observed that new industries provided for a political

base strong enough for the government to resist the calls for subsidization by influential declining industries, such as steelmaking.

This nonetheless, Zysman also points to the organized nature of the German economy as manifested in its banking system. Since the German system is credit-based, banks as financial intermediaries hold vast influence over credit allocation decisions, and are thus able to influence paths of economic development. However, the German banking system is also highly competitive, which means that no single bank or cartel of banks can hold exclusive power over business decisions. Therefore, banks exert influence through a complex system of shareholdings in private companies, which allows them to exert “hard” forms of power and to have insider knowledge of private business. When it comes to policy, the author argues that policymaking has been driven more by producer alliances than by the political dynamics of party politics, thus restating the weak nature of the German state.

According to Weiss (2021) the system of the Deutschland AG created trust relationships between government and industry, that made so that important national assets like parts of the defence industries could be privatised without fear of opportunistic behaviour by the buyers. The subsequent erosion of these arrangements would then have led to the German government to more direct forms of intervention like golden shares or investment screening.

At the beginning of the 2000s, political economy literature started more frequently being concerned with the relatively rapid dismantling of the pillars of the Post-War coordinated system. Here the literature clearly bifurcates between those authors who emphasize the persistent importance and resilience of Germany coordinated system and those who instead argue about a process of “convergence” on the liberal market model.

An important line of literature observed the gradual dismantlement of the “Deutschland AG”, namely the organized system of German capitalism, whose central pillars were banks, large corporations and strong organizations of interest representation. Streeck and Höpner (2003) show how the introduction of principles inspired by the American practices of corporate governance weakened the organizational capacities of German capitalism. While banks used to be central instruments of state policy and played an important role in safeguarding domestic players from foreign takeovers, the 1990s marked a rapid move of German banks away from this systemic role. Industrial shareholdings were increasingly sold and political pressures to intervene in rescue of national players were declined.

This process of progressive disorganizing of German capitalism did not only involve business players, from industry or banking, but also the traditionally strong social partners, especially unions and employer associations (Streeck, 2009). This disorganization of German capitalism created a situation in which a weak German state would co-exist with weak corporatist institutions, creating a certain power vacuum (Streeck, 2003).

Other authors inspired by the VoC approach, however, emphasized the resilience of German corporatist institutions and their continued role as central pillar in the German Coordinated Market Economy (Hall & Soskice, 2001). As a matter of fact, from a VoC perspective, it would have been strategically irrational for business and banks alike to opt out of the coordinated system that formed the basis of their comparative advantage. Vitols (2005) argued that the selling of blockholdings by large German banks was very likely to be only a temporary tendency that would halt before converging to a US-style model. Behind this reasoning is the observation that, although banks sold a large part of their shareholdings, other financial investors stepped in to play the role of “patient capitalists”, thus leaving the system fundamentally unaltered in its principles. In a more recent VoC-inspired account, Iversen and Soskice, (2019) conceded that the German institutional system, especially in corporate governance, has undergone important changes that have blurred the previous institutional arrangements.

Both these lines of thinking, the VoC-inspired and convergence theory, widely agree, implicitly or explicitly that the German state has remained substantially weak.

Subsequent work has been dedicated to analysing the reactions of Germany to the 2009 financial crisis and which kind of industrial policy featured the post-crisis recovery period.

Consistently with its previous corporatist tradition, Eber (2016) argues that the German industrial policy approach has maintained its reliance on the initiative of stakeholders, rather than governments. In this respect, the German industrial policy approach is “bottom up” and “decentralized”, since coordinating initiatives overwhelmingly take place without the need for the state to intervene, outside of its role of setting certain framework conditions.

Comparing industrial policy responses to the 2008-2009 crisis, Garcia Calvo and Coulter (2022) argue that German direct support to the industry was relatively limited. Targeted support to automotive was estimated to amount to 1.5 billion of financial aid, in contrast to the 7.8 billion aid made available by France. The authors do not however try to provide explanations regarding this difference in aid, which is likely to be due, rather than to policy decisions, to different severity of the automotive crisis between the two countries.

Following the crisis, the approach was to promote horizontal forms of industrial and innovation policy aimed at facilitating the overcoming of certain “bottlenecks” in the sectors where the country already had a comparative advantage, for instance by promoting scientific transfers.

The extensive role of German public banking in managing state aid in the financial crisis has led scholars to more closely examine the role of the Kreditanstalt für Wiederaufbau (KfW) in the old and new attempts to engage in economic and industrial policy (Naqvi et al., 2018; Mertens, 2021). These authors trace an history of the dynamism with which the KfW was used as a flexible policy instruments by the governments in order to support the German export-led economic model and to support the financing of housing in Eastern Germany after the reunification. It is also often highlighted how the KfW, due to its

expertise and its size, is often able to circumvent state aid regulation at the European and global level (Naqvi et al., 2018; Volberding, 2021). Volberding (2020) focusses instead on the role of the KfW in international development, pointing to how the bank had the capacity of working as an agent of more financialized forms of development finance. An interesting aspect highlighted by Naqvi et al. (2018) is the possibility that the KfW may be steeping in as a “functional equivalent” of the Deutschland AG, after this latter underwent the mentioned process of erosion.

Most recently, a number of studies engaged with the growing government activism in industrial policy, especially after the Covid-19 pandemic and the energy crisis triggered by the Russian aggression war in Ukraine. These studies generally aim to show that the German state has recently engaged in questioning the previously horizontal and light-touch paradigm of industrial policy, in favour of more vertical and selective forms, as a strategy of placing itself competitively against the US and China (Schneider, 2023)

Moreover, major drivers for change that have been identified are the green transition, including more restrictive EU-level regulation, the revamp of “technological nationalism” and the need to ensure resilience in supply chains. These challenges have led to a more proactive state policy encompassing both new sectors, for instance through subsidization of semiconductor producers, and the more traditional sectors (Altenburg, 2024).

Comparing industrial policy approaches in the field of artificial intelligence in China, the United States and Germany, Staab and Piétron (2020) observe the convergence of Germany towards a more interventionist models including more extensive public financing, a focus on national champions and measures to restrict foreign takeovers of critical technology firms. At the same time, industrial policy for AI is decentralized in terms of its implementation, heavily relying on stakeholders, following the traditional decentralized German style of industrial policy.

Analysing the Industrial Strategy 2030, Germann (2023) argues that Germany has adopted a “defensive-mercantilist” shift in its economic policy as an answer to challenges from the United States and China. This state-led industrial strategy emphasizes the need to promote company aggregations and create national and European champions, especially in critical sectors such as digital technology and energy. In particular, Germann examines the way in which the German state has engaged in a process of bargaining in order to obtain the consensus of both large industrial players and the small and medium sized companies. Family companies and SMEs initially connected the Industrial Strategy 2030 with the threat of being politically sidelined and as a potential source of vulnerability for SMEs vis-à-vis large players. The government thus tried to compensate SMEs and family firms by committing to more protective regulation, especially from foreign takeovers.

Specifically studying industrial policy in automotive, Gräf and Topuria (2023) argue that the Covid-19 pandemic has opened a window of opportunity for the German government to engage in more vertical and targeted forms of industrial policy, at least in two ways. On the one hand, the temporary crisis

framework allowed a relaxation of state aid regulation. On the other hand, the pandemic provided evidence of the risks connected with supply chain vulnerabilities.

A particularly interesting perspective is offered by the comparison between German and French industrial policy for the automotive sector made by Lechowski et al. (2023). In the first place, the authors observe striking similarities between the two approaches, which may be surprising considering that the two countries have been widely contrasted as opposites with respect to industrial policy style. In particular, the volume of funding made available is fairly similar, 8 billion in France and 7 billion in Germany, and the sector is perceived as strategic and central in both countries.

However, the authors also point to the fact that the German approach is more focused on promoting technological upgrading, also in terms of power-train technology, of the whole supply chain, while French policies were less concerned with facilitating structural technological change. Moreover, while the French approach seems to have relied mostly to direct connections between national champions and the state, the German approach has made considerable use of corporatist institutions.

In a recent article, Di Carlo et al. (2024) argue that the policy measures undertaken by the German government in reaction to the energy crisis overwhelmingly protect the interests of a coalition of actors whose common interest is to maintain the competitiveness of the German exporting industry. In this sense, corporatist institutions function here as captured by the particularistic interests of social partners, as already seen in Streeck (2003).

Inspired by the geoeconomic perspective, Koddenbrock and Mertens (2022) argue that the export-led nature of the German economic model considerably influences its foreign economic policy, which is to some extent a projection of the interests of such model. In particular, large corporations, accounting for a large share of German export and business associations carry a strong influence on German foreign economic policy, which is often seen as a channel to open new markets. This system based on a strong nexus between politics and exporting corporations is thus now facing threats due to changing global geopolitical and geoeconomic dynamics.

Babic (2023) also makes use of a geoeconomic perspective to show how the German state has promoted the foreign expansion of a strategic player like Deutsche Bahn in order to occupy fundamental nodes of a strategic sector like logistics.

All in all, the Italian and the German cases are both featured by a Post-WWII institutional system that was established in the Golden Age of Fordism, which then underwent sweeping changes in the last two decades of the twentieth century.

An important difference between the two countries is that, while in Italy the end of the Fordist period coincided with a changing nature of the state, in the German system the role of the state has changed

much less, while change has affected the overall institutional environment on which the state relied for the implementation, but also the approval, of its policy plans.

It would be tempting to see the recent more direct forms of intervention by the German state as a decision forced by the lack of any other instrument of policy coordination. However, for this to happen the German state should have built actual capacity to intervene, in order not to be in a situation of a weak state with weak social partners.

Zysman (1983) relevantly observed how the capacity of the German state to resist calls for subsidization from the declining sectors was strongly connected with a strong political base of advanced sectors. The current struggles to promote the new industries make it clear that neither Germany nor Europe in general have such a strong power base in the “new sectors”. The playing field of contemporary German capitalism is thus featured by very different conditions from those that made the ordoliberal paradigm survive, namely a system that was also “privately coordinated” (Deutschland AG) and a strong base of advanced sectors. We will see in the next chapter how Germany has moved within this new changed playing field.

CHAPTER III

Letting the others play, till the game goes well: Germany from the Postwar period to the neoliberal era.

„Hier offenbart sich denn auch die eigentliche Krux der Industriepolitik: Letztlich bedeutet sie vor allem die Erfüllung von Partikularwünschen“.

(Handelsblatt, 2002c).

The first aspect striking the observer of Western-German industrial policy in the Post-WWII period is its relative looseness compared to other large industrial economies like France and Italy. To be sure, the state was more active in that period than it would have been afterwards. However, in comparative perspective, direct intervention was seldomly and reluctantly undertaken, and economic policy mostly took the form of monetary and fiscal policy, together with tripartite concertation.

German industrial development proceeded thus with a good degree of “autopilot” after the Second World War. Even in periods of industrial crisis, for instance in the steelmaking sector, the paradigm was not so much one of “delaying adjustment”, but rather to facilitate it. As Zysman notes in his seminal chapter, *“[g]rowing industries created a political base from which the government could refuse bailouts to industries in transition or decline”* (Zysman, 1983: p. 252). Zysman pointed to how Germany provided very little sectoral support to declining industries, privileging rather an approach *“[b]ased on helping companies move into defensible market segments in high-wage industries, rather than on insulating them from competition or managing their adjustment”* (p. 257)

In this respect, the German strategy looked more akin to what Katzenstein (1985) held to be true for industrial policy in small countries: easing transformation by aiding adjustment, rather than by decelerating the destructive processes in the economy. This goes hand-in-hand with another feature Katzenstein associated with “small states”, namely a heavy reliance on export competitiveness to promote economic growth.

Therefore, differently from the French and Italian case, the state never developed the kind of administrative and planning capacity that would allow extensive direct intervention in the economy of a *dirigiste* type, which would imply the capacity of the state to steer the destination and the price of capital.

According to several observers, it was the banking system to play this role in the German case. In his book on the industrial policy of late developers, Gerschenkron (1962; p. 15) pointed to the strict interconnectedness between the German banking system and industry, as well as to the tendency of German banks to focus their lending activity on the core economic sectors of the 20th century (e.g. steelmaking, chemicals, and engineering). According to Gerschenkron, the state plays almost no role as

a mobilizer of financial resources in the German reality. As a matter of fact, the author argues that the state took up that role only in countries, like Russia, where financial institutions were not large or powerful enough to mobilize the critical capital needed for industrialization. Analogously, Zysman (1983) saw the banking oligopoly as the decisive decisionmaker in the allocation of resources in the German financial system.

Although the general assessment of a “light-touch” industrial policy is generally held to be correct in the literature, this should not deceive into thinking that state finance is a relatively recent phenomenon in Germany. On the opposite, it was during the Post-WWII period that contemporary instruments of state finance were designed and used in all their potential. The more “passive” policy style was thus paralleled by the creation of credit instruments that, although not as “heavy” as those seen in France, they were nonetheless important in the support of many branches of the export industry.

In this respect, the export, project and development finance activities of the *Kreditanstalt für die Wiederaufbau* (KfW), provided an important support to the exporting businesses, and the reception of development aid thereby disbursed was often conditioned to the import of certain German investment goods by the borrower (Naqvi et al., 2018; Volberding, 2020). The KfW engagement allowed to use the funds disbursed by the Marshall plan to be lent out through a special fund (*ERP-Sondervermögen*) and thus to use lending to finance SMEs and to promote exports abroad in a variety of sectors, including electricity, machinery, shipbuilding and aircraft. Notorious cases in this respect are the buildup of the German merchant ship industry, as well as the role of the export credits for Airbus (Harries, 1998).

Moreover, Höpner and Krempel (2004) bring qualitative evidence of the fact that, in the early reconstruction period, the financial sector was strongly pressured politically and considered as a “[c]omponent of the national infrastructure” (p. 346), to the extent that trade unions and other stakeholders would ask for deployment of financial resources in certain sectors.

Nevertheless, such instruments rarely obtained primacy in industrial policy, which relied instead mostly on indirect intervention and informal consultations. Differently from the French and Italian policy approaches, supported by relationships of ownership and direct interference in the credit market, the German style was thus non-coercive.

This soft form of industrial policy was orchestrated thanks to the aid of an informal brokering system, named *Deutschland AG*, involving the state, the banks, business and trade unions. A central feature that allowed *Deutschland AG* to be effective was its reliance on interlocking directorates and cross-shareholding, which created a network, at the center of which banks could influence industrial strategies and prevent hostile takeovers. According to one interviewee, an equally important feature was the possibility, for the politics-industry-finance triangle to reach agreements “behind closed doors” (Interview 19).

Within the *Deutschland AG*, large commercial banks played the role of central nodes, since they were the only actors in the financial sector having the critical size for undertaking the kind of large-scale operations involving cross-shareholdings and bargaining with industry and policymakers. The German financial system was however featured by the so-called “three pillars” (*Drei Säule*) working according to different logics in terms of corporate governance, customer targeting and systemic role. First, there are the mentioned large commercial banks that were founded in the 1870s, in particular Commerzbank, Dresdner Bank and Deutsche Bank. Second, the system of *Sparkassen* is composed of banks that are owned by local municipalities but operationally independent, and which cannot make business beyond their territorial borders of competence. The “*Landesbanken*” usually work as regional organizations of the *Sparkassen*, but they also have their own independent business and tend to intervene in business segments, especially larger customers, where the *Sparkassen* are less able to intervene. Particularly before the 2000s, the *Landesbanken* worked also as industrial political banks, financing projects that were politically wanted and featuring a sometimes-shady relationship with local politics (Handelsblatt, 2003b). The *Sparkassen* are eventually organized at a national level by the *Deutsche Sparkassen und Giroverband* (DSGV). The third component of the German banking system is the wide network of cooperative banks (*Genossenschaftsbanken*), which are also organized in national structures (e.g. BVR, DZB). All of the three pillars had a role in different forms of industrial policy although, when we discuss *Deutschland AG*, the large commercial banks played the predominant role.

Höpner and Krempel (2004) trace the role of large commercial banks in *Deutschland AG*, back to the 19th century, and in particular to the “founders crisis” of 1873-1879, when German large banks started getting involved in the financing of industrial companies. The banks often converted the non-performing loans of indebted companies into shares, which frequently made them stockholders in such companies. Interestingly enough, this process, which lays the ground for the subsequent formation of cross-shareholding, turned out to be to a good extent involuntary. Banks did not always find buyers to re-sell the previously acquired shares on the market and were thus left with the unsold shares. This carries a parallel, although in very different conditions, to the role the state played after the 1929 financial crisis in Italy, when the government took ownership of companies in a variety of sectors. In the Italian case, however, the state obtained the shares through the bailout and nationalization of failing banks whose structure was not so dissimilar from the German ones. In the Italian case as well, however, voices in favor of re-selling shares on the market were daunted by the lack of buyers, rather than by political will.

According to Zysman (1983), who also focused mostly on the large commercial banks, Germany thus developed as a “credit-based financial system dominated by financial institutions”. In particular Zysman pointed to the structural power banks enjoyed as oligopolistic movers of financial resources. This was, according to the author, the origin of their central role in the Germany system. Zysman defined this as a “tutelary role”, whereby banks controlled but also guaranteed the persistence of the German industrial structure, as seen in the case of Deutsche Bank intervening against the threat of foreign acquisition of

Mercedes Benz. At the same time, Zysman goes, no single bank could carry an excessive leverage over the overall system, thus providing a margin for some form of competitiveness within the oligopolistic credit market.

Before Zysman, Gerschenkron (1962) also pointed to the banks' role as oligopolistic providers of capital as the main source of their ability to interfere in the corporate governance of companies and thereby promote a cartelization process. However, differently from Zysman, Gerschenkron stated that this "golden age" of German banks could hold only before the end of the first developmental spurt (beginning of the 20th century), featured by capital scarcity and strong need to borrow on the side of industry. After the earlier development phase, a "process of liberation of industry from the decades of tutelage" (Gerschenkron, 1962: p. 21) ensued and banks started looking to expand their business abroad (p. 245).¹¹ Höpner and Krempel (2004) also take a very cautious position on lending as the origin for banking power, and point to the fact that retained earnings had been, throughout the Post-WWII period, the main source of financing for corporate investments.

Irrespectively of the evaluation on the origins of their power, it is undeniable that the capacity to mobilize financial capital to rescue companies and broker mergers gave banks the upper hand in the German system of corporate governance.

The Deutschland AG system however implicitly relied on an overarching requirement: all the parties had a shared interest in cooperating, also when such cooperation came with short-term losses for individual nodes of the network. As explained in the previous sections, the Varieties of Capitalism (VoC) literature abundantly detailed how these interconnections were paralleled by a set of "institutional complementarities", namely stable institutional arrangements that owed their stability to the fact that they represented a Paretian optimal that no actor would have interest in questioning (Hall & Gingerich, 2009). The VoC literature nevertheless rarely discussed the asymmetries of power within this institutional structure.

The incentives to cooperate appeared however to be on their way to fade already in the 1970s, when banks started selling their stockholdings and looking at more profitable business models. Höpner and Krempel argued that intensified competition for finance increased the opportunity costs of cartelization in the financial sector, making banks more eager to leave the cartel game. The institutional arrangements that paralleled and underpinned Deutschland AG underwent thus a gradual process of erosion throughout the last decades of the 20th century (Streeck, 2009; Höpner & Krempel, 2004; Baccaro & Howell, 2017). The "Durkheimian institutions" that managed to regulate the behavior of actors and centralize the

¹¹ It is unclear how Gerschenkron evaluated the role of the German financial system in Post-WWII Germany. As a matter of fact, the need for reconstruction may have regenerated the same conditions of capital scarcity that made German banks so powerful, in the eyes of the author vis-à-vis industry. Therefore, the Zysman and Gerschenkron evaluations do not need to be mutually exclusive.

expression of their demands into single monopolistic organizations (e.g. unions and employers associations) gradually eroded and German capitalism became decreasingly organized and growingly entropic. With financial markets becoming more liberalized, German banks started looking for business opportunities to grow abroad, while German international companies started enjoying the new opportunities of international capital markets, as exemplarily reported in Crouch et al. (2009).

Subsequent work would go as far as to point out that the growing liberalization and internationalization of the financial system made the categorization of “bank-based system” questionable, since banks engaged in financial activities of market-based banking (Hardie & Howarth, 2013). However, Germany is also one of the few countries in the Eurozone where the weight of the bank loans in the capital structure of non-financial corporations did not decrease in the 11 years between 2009 and 2020 (ECB, 2021). Therefore, if it is true that the German system underwent dramatic changes compared to the heydays of *Deutschland AG*, the system is comparatively more reliant on bank lending than most of the other systems within the Eurozone and by far more compared to the United States and UK.

What is of interest for the present work is not the prevalent business model within the financial system per-se, but rather its integration in the general system of mobilization of financial resources for industrial policy goals. In this respect, we will see how pressures have increased on the state to develop and expand instruments aimed at obtaining goals that could previously be obtained through *Deutschland AG*. We will see how this new effort of capacity building for intervention emerged as a result of the decay in the conditions that made the post-1990s German growth model largely a self-driving construction.

Before engaging in this narrative, we will need however to engage in a brief detour to introduce the main instruments of state finance which will repeatedly appear in the story.

3.1) The fourth pillar of the German financial system.

The previous section introduced the reader to the three pillars of the German financial system, namely the Sparkassen/Landesbanken, the cooperative banks and the large commercial banks.

There is nevertheless a fourth and smaller pillar which has consistently played a more restricted but strategic function: the system of state promotional finance. This system is composed chiefly of two types of institutions: the national-level bank *Kreditanstalt für Wiederaufbau* (KfW) and the so-called *Förderinstitute der Länder*, namely the promotional banks owned by the German federal states. These are not banks as retail banks are, since they do not hold deposits. Their liabilities come mostly from bonds issued on the financial markets, government refinancing or credit lines by other promotional banks.

In relative terms, the system of promotional state finance is of a rather small size, when compared to the other three pillars. According to my own calculations, the KfW and the Förderinstitute der Länder managed, in 2022, 932.8 billion euros.¹² This may seem a moderate amount compared to the 2.539 billion euros of the Sparkassen system (DSGV, 2024), the 1.175 billion of the Genossenschaftsbanken (BVR, 2024) and the total of 1.814 billion of the Commerzbank-Deutsche Bank duo (Commerzbank AG, 2024; Deutsche Bank AG, 2024).

Nevertheless, it should be considered that these state financial institutions are specialized institutions concerned with industrial and infrastructure financing, while they remain outside many of the business fields where German banks are active. Therefore, their critical importance lies in their holding of positions that are particularly relevant for the provision of public goods and for the financing of certain industrial segments that then have spillovers over the whole economy. For instance, SME financing allows small companies to overcome liquidity problems that could slow down production, for example because the company may be unable to pay suppliers in advance. This, in turn, influences the competitiveness of such companies and ensures a smooth delivery of the factors of production to the final producers.

Furthermore, when considering the systemic importance, it should be pointed out that some of the assets held by the private banking system are ultimately conducive to the activity of the state-owned financial institutions. For instance, the KfW operates most programs through the principle of on-lending (*Durchleitungsprinzip* or *Hausbankprinzip*). Under such principle, the public bank makes available a plafond or provides a loan, for instance a “global loan” (*Globaldarlehen*) to a private bank, which takes a fee and then turns it into a series of individual loans to companies. This arrangement is a path-dependency derived from the bargaining process behind the establishment of the KfW, whereby banks pressured for an arrangement based on the principle of *Ordnungspolitik*, namely that the KfW should only intervene with the intermediation of private banks and anyways only in fields that were not interesting for private banks’ business. The loans provided to the private banking system are devoted to specific projects or programs of the KfW and thus come with a very strict conditionality on their use (Interview 02). The promotional banks of the federal states, instead, differ widely in their business models, with some banks lending directly to customers, while others operating through on-lending. They are nevertheless expected to operate according to an *Ordnungspolitik* paradigm as well.

What all of these “fourth pillar” institutions have in common is their peculiar position of operating a banking business and being, at the same time, expected to be highly responsive to the economic plans of political decisionmakers, namely the national or local governments. Their mandate is indeed to

¹² These estimates exclude the promotional financial institutions that are owned by “Sparkassen and Landesbanken”, such as the “Landesförderinstitut Mecklenburg-Vorpommern” and the “Wirtschafts- und Infrastrukturbank Hessen”. It also excludes the public banks dedicated to the agricultural sector, since they are less relevant for the purpose of the analysis.

achieve politically desired economic goals that cannot be sufficiently achieved through the normal banking activity.

Although these institutions were founded mostly either after the Second World War (as institutions for the reconstruction) or after the reunification in the new federal states, they have recently seen a redefinition of their function or, in most cases, an increase in their size and importance. The total assets under management of the KfW in 2002 amounted to 259.7 bn Euros and, by 2022, they had raised until 554.6 (+113.5%).

As shown in Figure 7, the situation for the promotional banks of the states has been more heterogeneous. In particular, it seems that the banks that were already large to begin with grew even more during the 2000s. This is the case, for instance of the two largest promotional banks, the NRW Bank and the L-Bank, of the states Nordrhein-Westfalen and Baden Württemberg respectively. These two banks alone account factually for 67% of the total assets of the *Förderinstitute der Länder* in 2022.

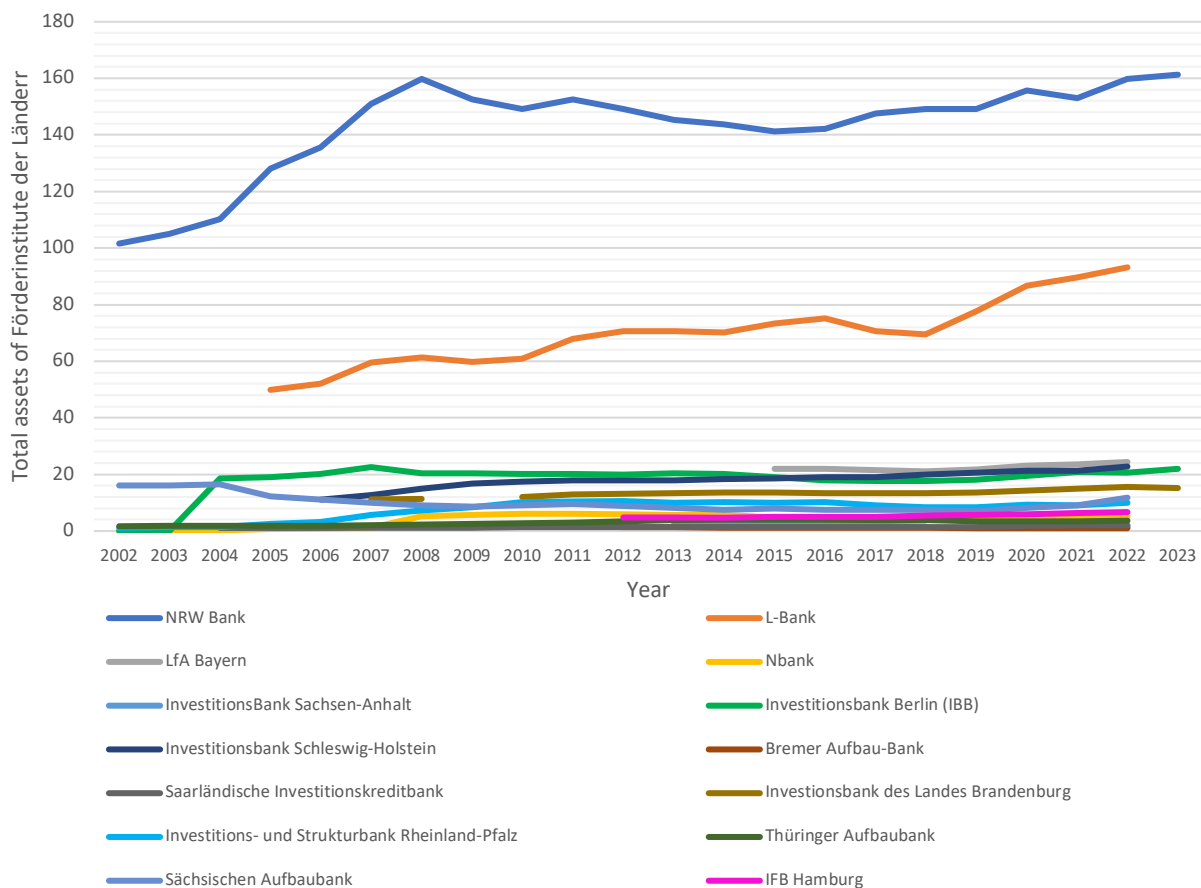


Figure 7 Total assets of Local development banks (*Förderinstitute der Länder*) from 2002 to 2022 (bn EUR) (elaboration on yearly financial reporting of the mentioned institutions)

KfW and Förderinstitute der Länder are thus public banks and thus function according to a bank business model. This corporate nature of public banks makes so that they are thought as working in complementarity with a series of other instruments of state finance, to which they are connected.

The most obvious ones are the ministerial programs, namely programs devised and managed by the competent ministries in order to promote certain policy goals, usually through some forms of subsidization. Since public banks have to work in all respects like corporations, they can *manage* subsidies, but they cannot disburse them out of their own resources. For such purpose, resources by the ministries are allocated.

However, there are instruments the government can set up in order to finance some specific investment and expenditure projects and that have the specific feature to figure outside of the balance sheet, and thus not to be calculated as public debt. These funds are the so-called “*Sondervermögen*”. The *Sondervermögen* tend also to be heterogeneous arrangements in terms of their administration, usually being administered partially by the BMF and partially by the competent ministry for the goals set up for the fund. The *Sondervermögen* interacts with the public banking system described above in two ways. First, the fund can provide a credit line to the banks, especially the KfW, thus lending them capital that they can then use in order to finance certain programs. Second, the KfW may administer the disbursement of certain funds as a third party (*Treuhandgeschäft*). In this latter case, the KfW does not take risk and acts as the simple administrator of the funds. The *Sondervermögen* have found wide popularity in German policymaking over the last decade, in light of the flexibility they offer around the limits of the *Schuldenbremse*. In fact, of the 29 *Sondervermögen* that were established in Germany between 1951 and 2022, 13 were established after 2009 (Bundesrechnungshof, 2023: p. 13). According to a report of the Bundesrechnungshof, in 2023 the new borrowing contracted through the *Sondervermögen* were 69% higher than the borrowing reported in the federal budget for 2022, and in 2023 it was 423% higher (Bundesrechnungshof, 2023: p. 24).

Eventually, a brief mention should be done of the “*Bürgschaftsbanken*”, which are banks tasked with providing *Bürgschaften*, namely a form of guarantee on particular loans. The *Bürgschaftsbanken* are usually locally organized (at the state and/or at the municipal level) and their ownership and control arrangements are heterogeneous. Usually, the governance is composed of a mix of stakeholders especially including the different sectors of the banking system, local municipalities and even trade unions and business associations. The *Bürgschaftsbanken* usually deal with the “most difficult cases”, namely for those credit requests especially for SMEs that the regular banking system considers to be too risky (Interview 21).

The Illustration 1 below shows how all these instruments are contextualized within a broader system of promotional finance. The present work is particularly focused on the instruments at the national level, although the *Landesförderinstitute* will also be dealt with at different point to show how attempts at

using state finance for industrial-political reasons are not limited to the national level. As a matter of fact, the two levels tend to complement each other.

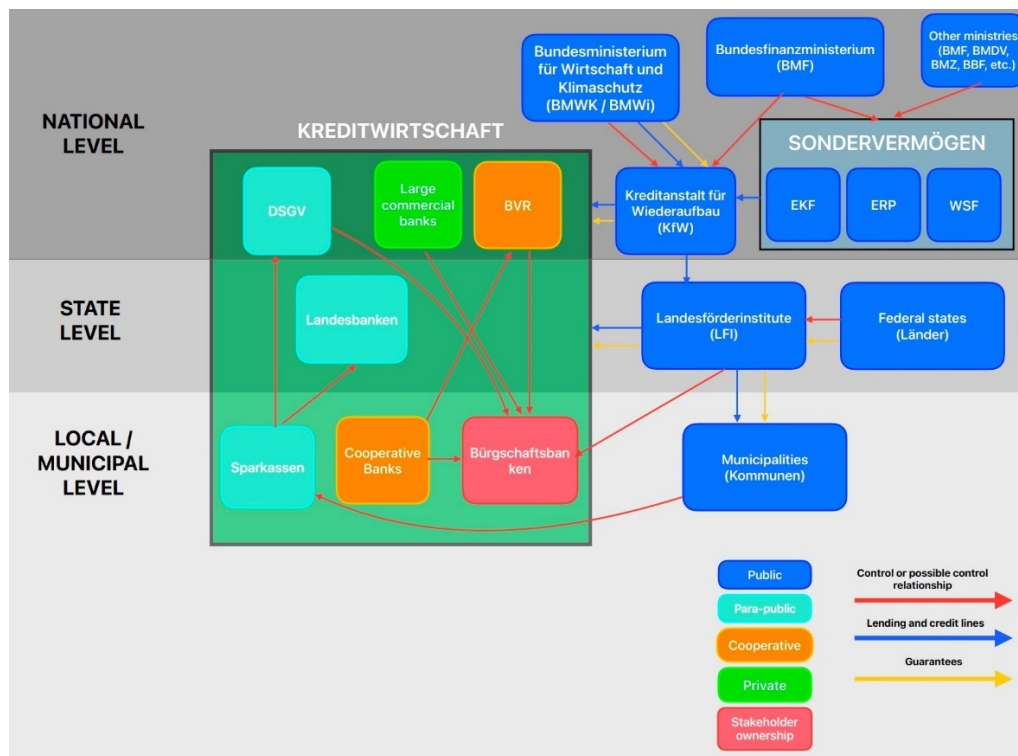


Figure 8 The German system of promotional finance

We will see how both the KfW and the local promotional banks have become instruments of mobilization of capital for industrial policy purposes, being much more central now than in the past, in light of a series of constraints and opportunities that were open by a changing global economy. Together with the re-found instrument of subsidies, state banking makes up the financial backbone of the recent rebirth of industrial policy.

The next three sections will be dedicated to describing the evolution of German industrial policy over the 20 years under analysis, by showing how its means and goals have co-evolved and how state finance has gradually been mobilized complementarily to other instruments.

3.2) The Golden Years: the early 2000s and the design of new instruments

At the beginning of the 2000s, an observer would have easily concluded that German industry appeared to have overcome the headwinds of the transition to Post-Fordism largely unscathed and even as a winner. The economic shock of the unification was apparently successfully overcome with a policy mix of compensating the East for the destruction of its industrial capacity and policies of liberalization of the labor market (Streeck, 2009).

It is in this period that the exporting industry consolidated its role as a massive driver of economic growth and the share of exports in relation to GDP increased from 30.8% in 2000 until 43.8% in 2008. The German export boost was attributed to a mix of real exchange rate devaluation (the Deutsche Mark was higher priced than the Euro) and wage moderation (Baccaro & Hopner, 2022). Even in the emerging green technology sector, the developments looked promising, and Germany managed to put the strengths of its manufacturing to use in the new emerging sectors (Nahm, 2022).

Looking at the value added in the pre-crisis period, the trend was of a rather steady, although mostly slow growth for some of the core sectors of the German growth model, especially metallurgy, which grew significantly thanks to rising global demand (Figure 9).

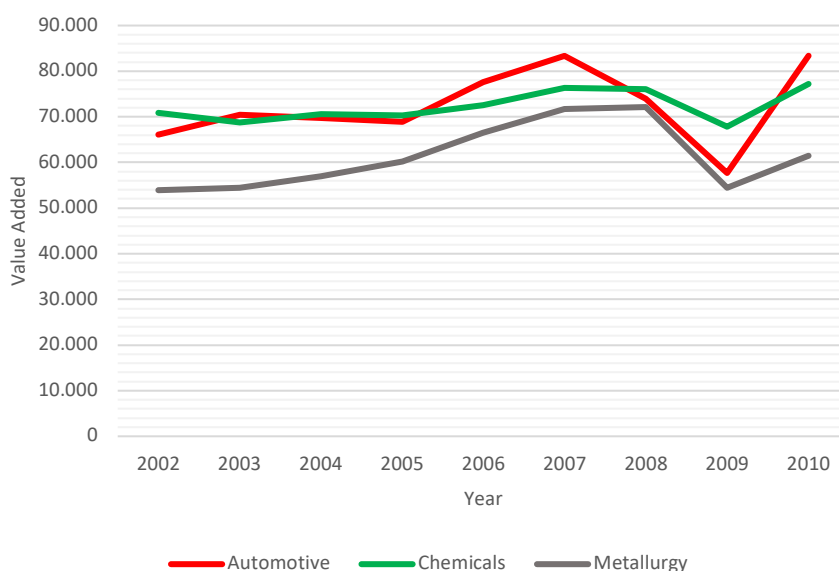


Figure 9 Value added of three industrial sectors (mln, EUR) (OECD-STAN Database, 2024) (OECD, 2024c)

What is interesting to observe however is that gross operating surpluses increased even more decisively than the value added, pointing to the possibility that corporations could extract a larger share of value that was not absorbed by inputs costs, and specifically labor.

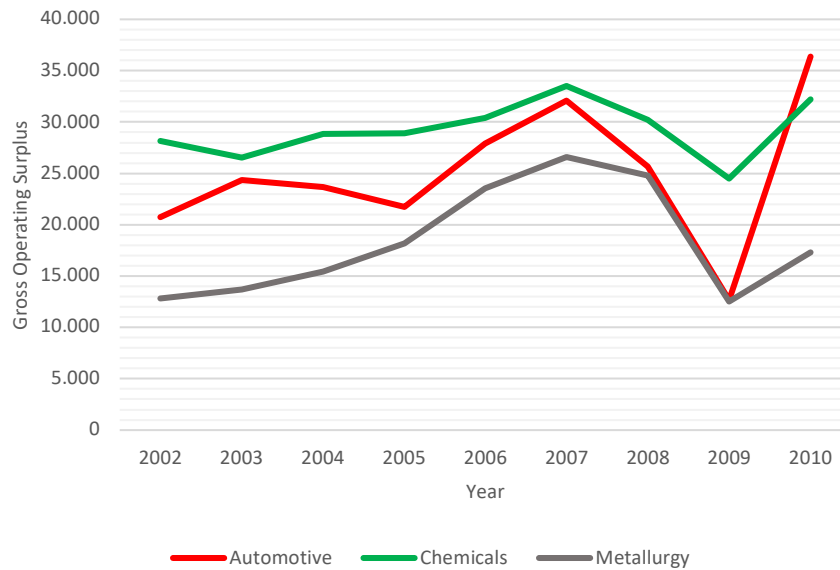


Figure 10 Gross operating surpluses of three industrial sectors (mln, EUR) (OECD-STAN Database, 2024) (OECD, 2024c)

Eventually, the trade balance displayed a clear upwards booming tendency, especially in automotive and machinery. Even the metallurgical sector, more price sensitive and whose imports peaked up during the period due to the surge in industrial demand, managed to maintain a relatively balanced trade position overwhelmingly thanks to the expansion of foreign demand.

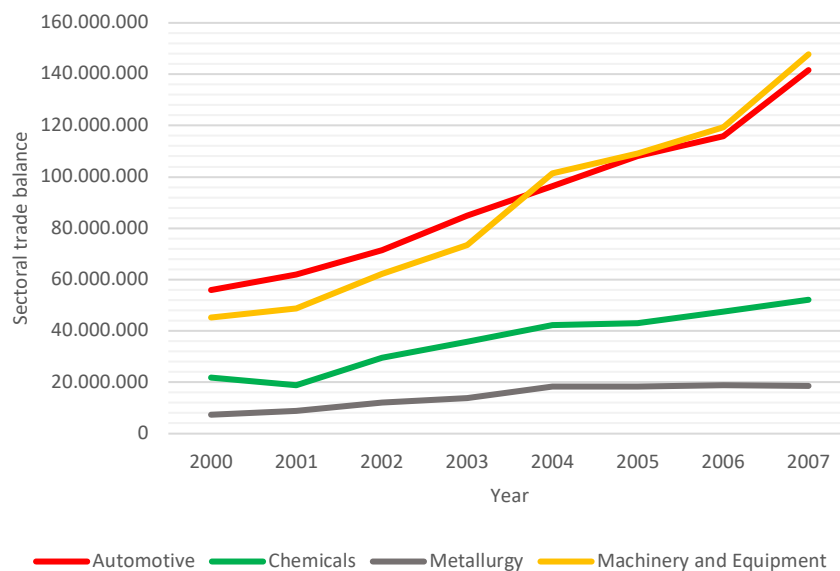


Figure 11 German sectoral trade balance (mln, EUR) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

Therefore, the German system did not seem to need particular measures of support in fields that were considered to be vital for its industrial capacity. For example, the chemical sector's exports increased, between 2001 and 2006 by 47%, while the sector's trade balance also raised by 44%. Analogously, over the same period, revenues in the steelmaking industry also increased by 61% (Statista, 2024f), contemporarily maintaining a rather strong net exporting position (Küster Simic et al., 2017).

This favorable situation did not impede the German industry to express some concerns, especially in some specific cases, even in automotive. Volkswagen, for instance, expressed disappointment at the 2004 results, with an operating result of 2 billion euro, due to "World overcapacity" and stronger price competition (Volkswagen AG, 2005).

In purely economic terms, the German chemical sector performed well even if considering its specialization in basic chemistry which, due to its lower marginal profitability, started suffering relatively earlier from problems of price competition and fluctuating raw material costs. The German chemical industry experienced, in fact, a much steeper decline in domestic employment compared to most of the other European chemical producers (VCI, 2000).

The chemical business was in particular still highly dependent on the cost of crude oil which, with its derivative naphtha, makes up the most important raw material for the chemical industry (VCI, 2018a; 2019b). One of the ways in which the German chemical industry tried to hedge against potential increases in oil prices was a process of diversification, most often towards the pharmaceutical industry, but also towards natural gas, as attempted by BASF entering the natural gas business (Handelsblatt, 2002a). The industry also pointed out that growth was triggered almost exclusively by an economic boom to which Europe was not participating, and which made the industry reliant on exports (VCI, 2004).

The German chemistry adaptive strategy to globalization was well summarized in a VCI report on the effects of globalization on the chemical sector:

„Angesichts stagnierender deutsche Märkte bietet sich für die Unternehmen ein Ausweg an, mit dem die Beschäftigung in Deutschland dennoch gesichert werden könnte: die Erschließung neuer Märkte mit hohen Wachstumsraten im Ausland“ (VCI, 2000: p. 18)

Chemical companies thus started engaging in internationalization not only by opening new markets, but also by opening production facilities abroad, especially in the Asian markets (VCI, 2000). Interestingly, this was framed not only as a competitive strategy, but also as a way to cross-subsidize more expensive production in Germany. The logic was that, by profiting from expanding foreign markets and cheap imported inputs, the profitability of German corporations would have allowed to keep employment domestically, where factor costs were higher.

This leads to observe that the honeymoon of the German industry internationalizing strategy was contingent on a phase of global development that entailed that the global players could still play their game in the global market while remaining also tied to the local economy by a sort of trickle-down profitability gains. It is clear that this competitive game could hold until the German global players would not face higher competitive pressure by foreign producers who could take their market shares and consequently undermine their profitability.

The shipbuilding industry learned this lesson earlier than would be the case for the remaining industrial branches. In particular, Germany was specialized in the production of container ships that also had strategic values for the industry (Interview 10). However, the sector underwent a strong competitive pressure starting already in the 2000s, especially due to a situation of expanding capacity and the price pressure coming from South Korean and increasingly Chinese production (European Commission, 1999; Tan, 2017; OECD, 2019). The origins of such price competition were mainly to be reconducted to lower wages, more favorable exchange rates and more generous policy of export credit in the competing countries (European Commission, 1999). However, there was also a further factor, namely that Korean shipbuilding industry had, by then, become largely independent of subsidies and could thus compete with the European industry on an equal footing (Tan, 2017; Lee, 2024; European Commission, 1999). Since the technological edge could not justify price differences and overcapacity seemed to be the new reality, Germany as a production location for ships lost its competitive power.

Differently from the other sectors, the shipbuilding industry thus started very early in the story to request government intervention and aid to maintain the German production capacity. The inactivism of the government in the sector, where workplaces were being rapidly lost, would lead to bashing by the trade unions. The local head of IG Metall Frank Teichmüller would call the government to real action, declaring:

"Allein Arbeitsplatzabbau, Kürzungen bei Weihnachts- und Urlaubsgeld, sowie der Ruf nach staatlichen Subventionen ersetzt nicht eine dringend notwendige Industriepolitik" (Handelsblatt, 2003c)

In this attitude, the shipbuilding industry would nevertheless remain more of a unique case, at least at that timepoint.

3.3) Stability and stalemate in industrial policy

"Die deutsche Industriepolitik war schon unter Helmut Kohl Kreisklasse, und das ist nicht besser geworden",

Michael Sommer, DGB (Handelsblatt, 2004n)

As a consequence of this relatively “rosy” situation, not much was standing in the way of the *Ordnungspolitik* paradigm to remain dominant in German policymaking, and the small-state style of industrial policy seemed as stable as ever.

The instruments of industrial policy remained thus, in this period, residual. No special demands were made by the industry and fiscal policy moderation remained unquestioned. When “industrial political” demands were raised by the industry, these were overwhelmingly in terms of “deregulation” or tax reductions and especially at the European level (e.g. VCI, 2000). A case in point is the attempt by the automotive industry to heavily lobby the Commission for a form of industrial policy that would increase the competitiveness of Europe vis-à-vis the US and Japan, by avoiding regulation that would lead to lower margins (Handelsblatt, 2004n). As seen, the shipbuilding industry made up the unique exception to this overall “anti-activist” environment.

This should however not deceive into thinking that other forms of indirect industrial policy were not being pursued at this earlier stage. In certain respects, coordination even strengthened. An interviewee pointed to the fact that it is in this period that a sort of exchange and very soft coordination between the highest political levels (i.e. the ministerial level) and the manufacturing business elites started arising, mostly through consultations (Interview 18).

Looking attentively at the period under consideration, two types of industrial policy can factually be identified: a “compensatory” type and a “diplomatic” type.

German industrial policy in this period was “compensatory” in that it was aimed at fixing those flaws in the system connected with the German growth model and with the weaknesses of the German financial system.

A field of intervention was energy infrastructure, which is of central importance for the German industrial system in light of its dependence on imported energy sources, and specifically natural gas. In this field, it is complicated to assess what the industrial policy approach was looking like. Overwhelmingly, the approach seems to have been to leave as much as possible to market actors. Although there was some mobilization of state finance, the interventions seemed to lack an overall strategic vision.

A case in point is that of the gas market deregulation of the early 2000s, in application of the EU directive on the liberalization of the gas market, which was aimed at increasing competitiveness and dismantle oligopolistic positions. It is remarkable that, rather than intervening with state regulation, the deregulation of the gas market itself was left entirely to the private stakeholders to be decided, and it turned into a power conflict between gas consumers and the owners of gas infrastructures (Handelsblatt, 2000; 2001).

The buildup of the extended gas infrastructure also was also largely left to the initiative of the market, since there were strong incentives for operators to engage in the enterprise. There was in fact strong competition between German energy companies such as BASF-Wintershall, Eon and RWE, to be awarded contracts with Gazprom, in a rush for profiting from the forthcoming stream of Russian gas exports to Europe (Handelsblatt, 2005b; 2005c). The Nord Stream 1 eventually resulted from a partnership between Gazprom and the BASF subsidiary Wintershall, which was also the largest German producer of natural gas abroad and who had the double goal to profit from gas revenues and to use the imported gas for its own plants (Handelsblatt, 2002a).

The role of the government in the buildup of the pipeline was overwhelmingly of economic diplomacy, with the establishment of “strategic projects” with the Russian Federation. Part of this effort was also motivated by the dominant position of the American energy conglomerates, which urged the government to promote some national players (Handelsblatt, 2003a).

State finance was also mobilized, at least for part of the project, when the government agreed on a subsequently highly controversial guarantee that would cover a 500 million euros loan by the KfW and a further loan of the same amount by Deutsche Bank (SZ, 2008). The guarantee would eventually be left unused by Gazprom (Handelsblatt, 2007), while the available sources are highly unclear regarding whether the two loans were eventually used by the company. A report by the *Forum Ökologisch-Soziale Marktwirtschaft* estimates that the Nord Stream 1 received German guarantees of 1.5 billion euros, in addition to further 2.3 billion euros export guarantees awarded by both German and Italian state agencies (Zerzawy & Fiedler, 2019). Such guarantees awarded savings on interest rates that profited Nord Stream, according to the report, for an amount of 66 million euros. What matters here is that the government was eager to mobilize a remarkable financial firepower for this large project, although only to fill some very specific gaps. Despite the political scandal that the guarantee raised, due to the appointment of chancellor Schröder at the board of the Nord Stream 1 joint company, the consensus on the necessity for the project was however cross-party, and the guarantee was not questioned (Handelsblatt, 2006).

It is also considerable to notice that in the general statements and in the press sources the project was justified as one of strategic importance, although the role of the imported gas for the industry did not seem to be the major issue. In general, the project was framed as one concerning the competitive field of gas the gas market, rather than one of wider industrial relevance for the competitiveness of the German industry. Why this is interesting is that it leads to observe that there are a series of policy processes that, despite never mentioning manufacturing or the exporting sectors, carry the interests of the export sectors as a “background condition” (Interview 02).

A second form of industrial policy that was undertaken in this period is softer, and has to do with economic diplomacy and light touch forms of promotion. Here, the term economic diplomacy is used in its broadest sense, meaning any attempt to use some form of persuasion or soft power to obtain industrial policy goals both abroad and domestically.

An example in this respect is the bargaining effort that Schröder undertook with the Commission in order to avoid further regulation of chemistry, harder emission trade system, and laxer regulation on takeovers (Handelsblatt, 2002b).

Especially the relaxation of takeover regulation seemed to be of particular concern for the Schröder government, which apparently saw it as a threat for the national industrial ownership structure. In the words of the economist Carl Christian von Weizsäcker:

"Es fällt jeder Regierung natürlich sehr schwer zu akzeptieren, dass nach einer Fusion die Führung des Unternehmens im Ausland liegt" (Handelsblatt, 2005f).

Schröder's concerns were far from unjustified. The contrast with the Commission over takeover regulation went in parallel with new tensions arising from the French attempt to revive industrial policy under the leadership of Chirac and Sarkozy. The French government engaged, in this period, in calls for a new European industrial policy that would create and promote European champions. To this "proactive" industrial political stance of the French, the German and the UK governments opposed a stance in favor of a more indirect form of industrial policy, aimed at increasing the competitiveness of Europe as a productive location, without picking winners (Handelsblatt, 2004d).

As often happened with French economic policy stances at the European level, these were to be contextualized in an overarching French strategy to create its own industrial champions, thus promoting an innovation and industrial policy targeting specifically large conglomerates (Handelsblatt, 2005e).

Hefty reactions were triggered by the case of Alstom which, in 2004, received a 2 billion bailout package and a capital injection by the French State, which acquired 21% of the company stakes (The Financial Times, 2006). This led to a bargaining process with the Commission, that led to the approval of the bailout but also to the sale of the 21% state-owned shares in 2006.

In this occasion, the German corporation Siemens accused Alstom to be using state aid to subsidize turbines sales at cut-throat competition costs on the market and factually participated in the legal case against state aid (European Commission, 2004).

Among the conditions imposed by the Commission for the state aid to be approved there was the fact that Alstom should find a non-state partner entering the capital of the company. The German corporation Siemens expressed a serious intention to enter as a partner, but Alstom refused. The refusal triggered the reaction, among the others, of the German *Deutsche Gewerkschaftsbund* (DGB), which claimed that the refusal of Siemens as partner could have been an imposition from Paris (Handelsblatt, 2005f).

Another popular source of tension was the takeover of Aventis by the French conglomerate Sanofi, which obtained public praise by the French government (Handelsblatt, 2004h). The proposal of a alliance of shipbuilders under French leadership also provided for tension, also in consideration of the

fact that the French state is directly invested in some of these companies (Handelsblatt, 2004f; Handelsblatt, 2005f)

On its side, the German government reacted to French renewed activism by initiating consultations with the French government to discuss the matter. However, the government position has been criticized as excessively passive or at best mild (Handelsblatt, 2004n).

In general, the government did not engage in a strong policy of takeover management, and it did not go much beyond soliciting the industry. For instance, Schröder attempted to solicit the banking sector to necessary fusions in order to maintain competitiveness and create players of global importance (Handelsblatt, 2004i).

The ownership matter was however taken very seriously at the local level, where the local governments of Niedersachsen and Baden-Württemberg, both CDU-driven, were backing the plan of Porsche to acquire Volkswagen. Such plan was overtly framed as an industrial policy move by the Baden-Württemberg governor, with the purpose of shielding the two companies from possible foreign takeovers (Handelsblatt, 2005h; 2005i).

A final mention is deserved for those initiatives that were aimed at “opening new markets” for German technologies through soft means such as consultancy, networks and the organization of trade fairs. An example of these low budget initiatives is the “*Exportinitiative Erneuerbare Energien*” introduced in 2002, which was aimed at promoting the export of German renewable energy technology in “target markets”.

Overall, the German industrial policy of the period was thus light touch. This does nevertheless not mean that there was no state finance at play. As a matter of fact, these were time of steep innovation of state finance, although its industrial-political role were in fact extremely limited.

3.4) Promotional finance in “good times”

The competitive performance of German industry in the global market made so that there was little will or pressure to use state finance to promote industrial policy goals. The growth model could be preserved without the need of a steering center.

Interventions in individual companies were rare, such as the unsuccessful bailout the construction industry conglomerate Philipp-Holzmann (Handelsblatt, 2005g). Other more patchwork initiatives were undertaken, such as the support provided by the government to Opel, when it took charge of part of the requalification costs for workers in Rüsselsheim, making so that the parent company General Motors would save several million euros (Handelsblatt, 2004e).

Even considering the plans for financial support out of government budget and guarantees, the only industries that received substantial financial support in this period were shipbuilding, aircraft and coal mining (Bundestag, 2006a; 2006b). For aircraft and shipbuilding, this had to do with conjunctural elements that required temporary measures of support, while for coal mining the decision was to step out of expensive financial support, presumably also for environmental considerations.

The policy of incentivization and subsidization remained nevertheless particularly salient for a specific segment of the electricity generation market, namely the solar panel industry. It was previously discussed that Germany was performing well in the clean energy sectors. However, it has to be pointed out that the success of such sectors was highly dependent on public promotion measures, as the negative results following the 2002 interruption of subsidies showed (Handelsblatt, 2004). This should provide a qualification to optimistic explanations regarding the synergy between export-led growth manufacturing and the rising of the solar panel supply chain. This reality holds to an extent that, asked by the Handelsblatt if the solar panel industry could take off without state support in the short term, the representative of solar businesses Carsten Körnig would declare:

“Das ist eigentlich nicht möglich. In 2002 jedenfalls kostete die Kürzung der Förderung viele Solarwärmeunternehmen die Existenz. Im Frühjahr 2003 wurde diese politische Fehlentscheidung korrigiert - und gleich ist in den Markt wieder Zug hineingekommen.” (Handelsblatt, 2004).

The subsidization policy, mostly implemented and self-financed through the feed-in-tariffs, was accompanied by KfW programs providing cheap funding for solar energy installations, such as the “100.000-Dächer Programm” (1999-2003) and the “Solarstrom erzeugen” program (2003-2010).

The policy of economic development became in general more based on repayable loans, rather than on subsidies. It is in this context that the role of the KfW was thus thought as the usual public banking in the fields where banks were reticent to be involved due to high risks and lower margins. In particular, two categories of “losers of the financial system” stood to be advantaged by the KfW activity: the construction industry and the small and medium enterprises.

The housing industry stood out as the largest beneficiary, in relative terms, of the KfW programs in this period. Of the 429 billion of funding amount provided by the bank between 2002 and 2007, roughly 78 billion (18%) were employed in the housing sector, which thus made up the biggest beneficiary of targeted programs (KfW, 2005a; 2006; 2007; 2008). Two important specifications should be made in this respect. First, the use of the term “housing sector” rather than “construction sector” is important, since one of the main programs in housing, the *Wohneigentumsprogramm*, also financed the acquisition of second-owner houses, meaning that not all the funding was channeled directly to the construction sector. Second, the funding volume is not only dependent on the KfW policy, but also on the demand for the specific program. This means that distinguishing between an increase in funding because of policy shifts or because of higher demand may be tricky, especially because data on the rejection rates

of KfW loans for specific programs are not publicly available. This considered, the average share of lending volume on total lending over a certain amount of time should decently approximate at least the overall priority of the program in the policy agenda, and we can see that the fluctuation range is always between 18% and 21% each year.

Beyond the sheer amount of funding at its disposal, both the written and the interview sources solidly confirm that the focus on the construction sector was purposeful. This choice is grounded in a “taking two birds with one stone” logic.

Primarily, the construction sector was considered as a handy tool to intervene counter-cyclically in the economy, since a good number of economists and public officials consider the sector to have a strong multiplier, at least in the short-run¹³. This counter-cyclical reasoning is overtly expressed in the KfW reports, framing the interventions in the housing sector as part of the government counter-cyclical stimulus, and reporting each year an estimate of the jobs created through the KfW funding (KfW, 2006; 2007; 2008; 2009). In the years 2002-2003 the German economy did indeed suffer from a small recession, and measures in the construction industry seemed to come in as a handy tool to counter the trend. Even more, this economic logic well matched the necessity to “rescue” a sector that was not particularly thriving in the German context, despite its still non-negligible economic weight on GDP (3.9% in 2005) and its strategic importance.

The second advantage of choosing the construction industry as a way to stimulate demand was the possibility to give a discursive framing in terms of environmental policy. Considering that 226.3 million metric tons of carbon emissions in Germany in 2005 were directly or indirectly related to residential housing, intervening on energy efficiency was seen as a way to “kill two birds with one stone” (Destatis, 2022). Furthermore, providing financing to new potential first homeowners and cheap social housing was another socially desirable goal, especially considering the low levels of homeownership in Germany.

The second big beneficiary of the KfW programs were the small and medium enterprises and the “*Mittelstand*”, which could obtain financing where banks considered it too risky or rather not profitable enough to engage in business. This appeared to be a systemic problem in the German context, where SMEs reported struggles in financing investment (KfW, 2004). For instance, the KfW *Mittelstandspanel* 2004 reported that, in 2003, only 41% of the SMEs that planned investments and underwent loan negotiations with banks concluded them successfully and 57% of the times this was due to rejections on

¹³ To be sure, the multiplier alone is not enough of a reason to use the construction industry as an counter-cyclical instrument. In fact, some reports estimate the multiplier for the automotive and the steelmaking industries to be sensibly higher than that of the construction industry. Rather, the matter seems to be that the construction industry has a large multiplier that activates demand already in the very short term

the side of the bank. For the year 2004 the report reports an even worse scenario, with 65% of the loan negotiations failing (KfW, 2005b).

Particularly relevant are, in this respect, the frictions between the KfW's Chairman Hans Reich and the banking system. Reich criticized the German banking system for being too risk averse and invited banks to ease their lending conditions to small businesses. The *Kreditwirtschaft* (banking sector) stroke back by denying the grounding of these accusations with the epitomical statement at the Sparkasse conference that "there is no right to borrow" (Handelsblatt, 2004a; 2004c).

The flagship project of the Reich administration, the "*Kreditfabrik*" ("credit factory") was also essentially a project of interest for SMEs. The *Kreditfabrik* was intended to simplify and standardize the evaluation procedures for assessing the creditworthiness of individual loans. With more standardized procedures and less discretion involved, banks would require less personnel to evaluate individual loans, creating a sort of "economies of scales" for the lending business. In this way, lower costs for the banks would lead to lower interest rates for the final borrower. The *Kreditfabrik* and the KfW decision to enter the segment of student credit were at the center of strong criticism by the banking system, since this was considered to be a business segment that should be exclusive field for banking competition (Handelsblatt, 2005a). Banks stated that the KfW was dangerously reaching final borrowers, and initiatives such as the *Kreditfabrik* were in direct competition with an analogous project by the Sparkasse.

In this period, programs aimed at the provision venture capital for innovative SMEs were also being expanded, although they remained rather residual, both in terms of numbers and in terms of focus. However, the enabling financial conditions for innovation started increasingly being a topic for the KfW, which saw the role of a strong innovation economy as important for "*[r]emaining international competitive as a high-wage export-oriented country*" (KfW, 2008: p.38).

At the moment when the KfW engaged in these forms of compensatory programs, the promotional features of its export and project finance business were, conversely, being remarkably weakened.

The critical moment was when DG Competition required, on ground of State Aid regulation, that the KfW would separate its commercial export finance business from the rest of the main "promotional business" of the bank. Under this agreement, reached in 2002, the KfW should have created a project finance subsidiary that would comply with German banking regulation and that would operate fully as a commercial bank. Importantly, the bank would be allowed to obtain funding from the parent company (KfW), although at market pricing.

This led to the corporatization of the subsidiary "KfW-IPEX", which operates still nowadays as a commercial bank abiding to banking standards, and thus not enjoying the sovereign backing of its liabilities. This should nevertheless not lead to the deceiving conclusion that IPEX has worked as an entity completely detached from the parent company. Far from that, we will see how IPEX has been

contributing to the general KfW mandate both through its investment focus and the deployment of its operating results.

Perhaps more importantly, the KfW itself has publicly been erratic and unclear regarding IPEX status within the KfW Group. The bank overtly expressed that “[d]ie KfW IPEX-Bank ist zwar keine Förderbank, bleibt aber dem öffentlichen Auftrag der KfW verpflichtet (...) Die KfW IPEX-Bank ist für die vom Export und von außenwirtschaftlichen Aktivitäten besonders stark abhängige deutsche Wirtschaft seit Jahrzehnten ein verlässlicher Partner und Garant für die Bereitstellung langfristiger Finanzierungsmittel” (KfW, 2008: p.4)

Furthermore, despite claiming that “[i]n der KfW IPEX-Bank sind alle Geschäftsaktivitäten der KfW Bankengruppe gebündelt, die im Wettbewerbs mit anderen Banken stehen” (KfW, 2007: p. 67), they also argued later that IPEX “[v]ersteht sich aber keineswegs als neuer Marktteilnehmer” (KfW, 2008: p. 69)

At this timepoint, the place of IPEX in the overall structure of promotional finance is thus difficult to frame and, from the gathered sources, it looks like the issue was also far from clear to the participants in the process. For now, it is sufficient to point out that the “corporatization” of IPEX did not look to be a big matter of political concern or contrasts. Although it is certainly true that IPEX kept fulfilling an important role for the competitiveness of the exporting sector, this weakening of its “promotional features” did not look too problematic for the German system, presumably because the manufacturing sector just did not require particular forms of subsidization to maintain its competitive edge.

Overall, the field of activity of the KfW looked highly heterogeneous and thoroughly targeted at compensating the losers not only, and not so much, of the German growth model, but rather of the German financial system, namely the construction sector, low-wage earners and small and medium-sized enterprises. Importantly, this kind of finance is not conjunctural, but only aimed at companies with good profitability perspectives and overwhelmingly aimed at financing investment (and not current expenditure) of the “losing” sectors. When considering the engagement in residential investment, the KfW did however fulfil an important counter-cyclical function.

Looking at the KfW allows to grasp only a part of the large movement that had taken place in this period in the reconfiguration of state finance.

At the local level, similar processes of corporatization of local development banks were taking place, driven both by regulatory reasons and by the overall tendency to shift the forms of economic support from subsidies to lending instruments, which could also be more easily managed in a balance sheet perspective. The state Nordrhein-Westfalen (NRW) declared in this period a shift of the promotional policy towards loan instruments rather than the traditional subsidies (Handelsblatt, 2004j). The KfW program for the Land Brandenburg is another case of this new style of local development policy, offering lending and consulting instruments to attract foster economic activity (Handelsblatt, 2004k).

In this period, many of the contemporary state-level financial players were founded, either as spinoffs of previously existing institutions, or as brand-new organizations (Table 1). For instance, in 2004, the state of Niedersachsen founded the *NBank* and the state of Sachsen-Anhalt obtained its independent *Investitionsbank Sachsen-Anhalt*. In 2002, the *NRW Bank*, mandated precisely with tasks of economic promotion, was separated from the former holding *Westdeutschen Landesbank Girozentrale* and it would soon become one of the largest development banks in Europe. These kinds of reorganizations had two goals. On the one hand, they helped better separate the promotional business from the “commercial business” of these institutions, as required, among the others, by the European Commission. On the other hand, they provided the state, at any level, with a powerful financial instrument with which to carry out off-balance-sheet economic promotion. Especially at the local level, this was attempted as a functional equivalent to public indebtedness, since the promotional activity of these banks is calculated outside the public balance sheet.

Most importantly for this chapter, these financial institutions allowed the *Länder* to make promotional programs targeted to the needs of local businesses or to join and adapt national level programs to local needs. In this respect, it should also be pointed out that several interview sources point to the fact that the *Länder* are considered to be much closer and much more influenced by local business interests than the federal level (Interviews 08, 10, 34).

We thus see a first spurt of balance sheet expansion of the *Förderinstitute der Länder* in the years right preceding the economic crisis. For instance, the assets of the *NRW Bank* rose, in this period, from 101.6 bn (2002) to 151 bn (2007), experiencing roughly a 50% increase (Figure 7).

Bundesland	Bank	Year of establishment
Baden-Württemberg	L-Bank	1998
Nordrhein-Westfalen	NRW Bank	2002
Niedersachsen	NBank	2004
Schleswig-Holstein	Investitionsbank Schleswig-Holstein	2003
Bremer Aufbau Bank	Bremen	2001
Berlin	Investitionsbank Berlin (spinoff from a 1924 institution)	2004
Saarland	Saarländische Investitionskreditbank	1951
Bayern	LfA Förderbank Bayern (predecessor since 1951)	1997
Mecklenburg-Vorpommern	Landesförderinstitut Mecklenburg-Vorpommern (Part of Nordbank-LB)	1994
Brandenburg	InvestitionsBank des Landes Brandenburg	1992
Thüringen	Thüringer Aufbaubank	1992
Sachsen-Anhalt	Sächsische Aufbaubank	1991
Hessen	Wirtschafts- und Infrastrukturbank Hessen (not legally independent of the Landesbank)	2009
Rheinland-Pfalz	Investitions- und Strukturbank Rheinland-Pfalz (ISB)	1993
Hamburg	Hamburgische Investitions- und Förderbank (IFB) (predecessor from 1946)	2013

Table 2: Förderinstitute der Länder: foundation or corporatization

This development at the state level was paralleled by an abrupt increase in the KfW credit lines to these institutions from 1.5 billion in 2002, to 8.3 billion in 2007. The usual instrument employed for this purpose was the *Globaldarlehen*, namely a large loan given to a credit institute, that then is tasked to allocate it into individual loans according to certain guidelines

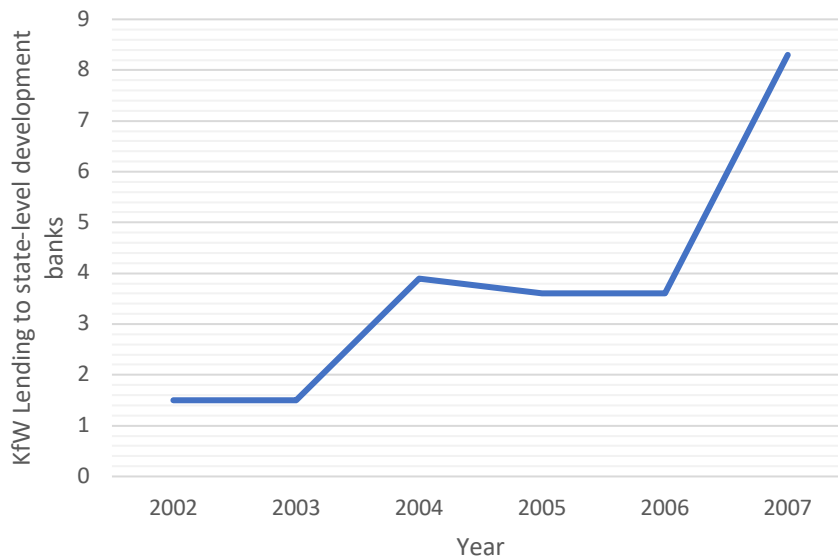


Figure 12 KfW credit lines to the *Förderinstitute der Länder* (bn, Euros) (KfW Annual Reports, 2004-2008)

Inquired on the reasons for this spurt in the use of new financial instruments, interviewees highlighted the idea of emulating the example of the KfW and especially of employing resources for economic or infrastructural projects without impacting on the public budget and debt. As a matter of fact, the kind of investment funded by local development banks most often mirrored the KfW programs with a particular focus on infrastructure and public housing.

It is worth noticing that the budget neutrality advantage of these institutions was already salient in this period, when the *Schuldenbremse* was not introduced into the constitution yet. This points to the fact that the *Schuldenbremse* may help make sense of the acceleration in the use of these kinds of instruments, but it cannot explain their overall rising in importance, which dates back to an earlier period and which is to be found in the will of the states to maintain ownership of a financial instrument that could come handy in crisis situations or for specific policy projects.

Overall, the story outlined in this section shows that state finance remained largely outside the realm of industrial policy as traditionally intended. The main role envisioned for state financial instruments was, so far, compatible with an authentic *Ordnungspolitik*, namely with the idea of a state that intervenes only to fill the gaps due to market imperfections, but which is agnostic in terms of goals and priorities of economic development. We will see how the looming financial crisis created the first break in the wall of this policy paradigm.

3.5) The financial crisis and state engagement in targeted counter-cyclicity

When the 2008 crisis started hitting the core of the German economy, the first priority of the government appeared to be to avoid that the financial crisis would turn into a fully-fledged industrial crisis. For this purpose, state finance was mobilized counter-cyclically, but in a very selective way.

As a matter of fact, the Great Financial crisis (2007-2009) compelled the banking arm of the German state finance to a peculiar role: overcoming its own crisis and, at the same time, rescuing the real economy.

Perhaps ironically, the KfW was one of the first banks to be directly affected by the crisis, due to its controlling shares in the *IKB Deutsche Industriebank*, a German bank specialized in providing finance to SMEs. The KfW bought such shares in the year 2001 from *Allianz* and *Münchener Rückersiverungsgesellschaft*, behind concerns that the two shareholders would break it up.

The IKB was one of the first German banks to be hit by the financial crisis, as a consequence of its high exposure to the US subprime mortgage market and to the US financial company “*Rhineland Funding*”. As the larger shareholder, with roughly 38% of the stakes in the IKB, the KfW coordinated a first rescuing package in august 2007, bearing 70% of the 3.5 billion Euros bailout on its own, while the remaining 30% featured the participation of investors including private banks. IKB’s financial health kept nevertheless deteriorating, and the KfW increased its stake in the bank to 43.4%, while trying to bridge the bank to a potential market sale. Considering several forms of direct and indirect support, the IKB bailouts costed to its participants (government, banks and KfW) around 8.5 billion euros (KfW, 2009; 2010; 2011; 2012). It is only during the second half of 2008 that the IKB story came to an end, with the sale of more than 90% stake of the bank to Lone Star Fund. The overall losses suffered by the KfW group due to the financial crisis and the IKB case were estimated to be in the order of 6.2 billion euros in 2007 and 2.7 billion in 2008.

Nevertheless, the crisis in the German financial system went well beyond IKB and affected to a remarkable extent the largest commercial banks. This led to the German government stepping in to bail-out Commerzbank through a capital injection that would result into the acquisition of 25% of the bank’s shares. The Dresdner Bank was subsequently also acquired by the Commerzbank itself. At the same time, the *Landesbanken* system was also undergoing a deep crisis, with the particularly impactful case of the HSH Nordbank, which was highly specialized in lending to the shipbuilding sector, where the crisis led to a vertical fall in revenues and orders.

The bad conjuncture in the financial system was accompanied by an inevitable pro-cyclical risk-aversion of banks, that were additionally engaged in restructuring plans leaving little room for credit generosity. Together with the declining revenues of some core exporting sectors, the risk that the financial crisis could transform into a fully-fledged industrial crisis started to appear as particularly realistic.

As observable in the figures above, value added and gross operating surpluses in some of the core exporting sectors of German manufacturing saw their heaviest drop in 2009. The automotive industry experienced a particularly steep decline due to the fall of orders, particularly of demand from exports.

Interestingly, the construction industry did not experience a comparable decline, despite its pro-cyclical features. Construction investment was 210 billion Euros in 2008, it fell to 207 billion Euros in 2009 and eventually peaked up to 213 billion in 2010 (HDB, 2013). The recovery was particularly vigorous for the “secondary construction industry” (*Ausbaugewerbe*), rather than for the main construction industry of residential buildings. The “primary construction industry” experienced a decline in revenues of only roughly 5% in 2009, and stagnation in 2010. By comparison, automotive lost 20% in revenues in 2009 and, by 2010, its revenues were still 7% below the 2008 level. As further indicators show, occupational levels in the construction industry also remained remarkably stable between 2005 and 2010, while the construction equivalent of exports, namely foreign contracts, experienced a slight decline in 2009, only to peak up at their highest historical level in 2010.

It was specifically the crisis in the industrial sector that led the German government to more decisive forms of intervention, in order to avoid the ensuing of a large-scale industrial crisis with unforeseeable consequences.

This “frame of crisis” created a potential critical juncture for the redefinition of the relationship between government and banks in the German system. Banks came to be under attack and accused of generating a potential credit crunch (*Kreditklemme*), not only by representatives of the government, but also by the *Bundesverband der Deutschen Industrie* (BDI) as representative of the industry. (Handelsblatt, 2009a).

State finance was thus rediscovered not only as a counter-cyclical instrument, but also as a central instrument for the state to reach out to the real economy, and thus as an enhancement of state capacity. The KfW, not yet fully recovered from the IKB trouble, became suddenly central and expanded its instruments of intervention. It is also at this moment that a room of opportunity opened to increase the independence of the KfW from the rest of the banking system. The opportunity arose when the new FDP Minister of the Economy Rainer Brüderle threatened to promote a reform of the KfW that would temporarily lift the *Hausbankprinzip*¹⁴, making the bank factually able to lend directly to customers (Handelsblatt, 2009b). The idea was scaled back once it was clear that the KfW was lacking the organizational structure that would allow the evaluation of the creditworthiness of the loan applicants, which requires a certain locally-embedded knowledge (*Vor-Ort-Kenntnisse*) (Bundestag, 2010: p. 20). Beyond the feasibility of the project in a short time, the political will of the government to undertake

¹⁴ The *Hausbankprinzip* (home-bank principle, or on-lending) entails that the KfW does not regularly lend directly to customer, but rather it must lend money to the banking system, which then lends them out to the individual customers. This arrangement was the result of the decisive opposition of German banks to have a new state-owned competitor in the banking field which could finance itself at the sovereign rating and thus offer better products on the loan market.

this step was doubtful, since chancellor Merkel reacted highly skeptically to Brüderle's idea (Handelsblatt, 2009c). Allegedly, the lifting of the *Hausbankprinzip* was considered to be an option only in case of emergency, but it was clear from the parliamentary question time of the *Staatssekretär* that the option was not even being contemplated, since there was no plan in case of emergency (Bundestag, 2010).

This nonetheless, the crisis period was critical for the enhancement of the KfW capacity, particularly for the role of the bank in the implementation of the "Konjunkturpaket II", for which the KfW was now mandated to provide financing not only to SMEs, but also to large enterprises. This represented a very clear extension of the KfW field of competence, since the bank was born and had overwhelmingly been concerned with financing to SMEs. As a matter of fact, of the roughly 50 billion Euros of budget allocated to the Konjunkturpaket II, around 25 billion were lent to large enterprises.

A large part of these funds was allocated through the "*Wirtschaftsfond Deutschlands*" co-managed between the government and the KfW. This was an emergency fund tasked with disbursing loans to SMEs and large enterprises, the latter of which could apply for loans for up to 300 million euros. For particularly big loans, the procedure of approval did not involve only the board of managers of the KfW (*Vorstand*), but also a governmental steering committee, the "Steering Committee for the Financing of Enterprises" (*Lenkungsausschuss Unternehmensfinanzierung*), which then would have had the last word on loan decisions.

This measure provided remarkable financing to an important series of large German enterprises, unsurprisingly mostly from the exporting sector. Although data on the sectoral distribution of the funding is not publicly available in the form of database, the importance of the traditional branches of the German exporting industry is mentioned in the KfW Reports (KfW, 2009; 2010). The KfW itself cursorily mentions the predominant weight of the manufacturing industry, in particular "[a]utomotive, machine engineering and Metal production and processing" (KfW, 2010: p. 58).

The sectoral composition of lending tells however little regarding the politics of state aid underlying the *Deutschlandfonds*. For this reason, the next section will zoom on individual cases and on the political processes leading to the concession or rejections of loans. It will be seen that, at this stage, the relationship between preferred sectors and state aid was far from automatic.

3.6) Not all children are equally deserving: deciding on which national players to rescue

The disbursement of funding for big corporations was seen as a necessary evil and spurred debate especially when such funding looked unjustified. The most relevant case is perhaps Porsche-

Volkswagen, which deserves closer scrutiny for its involvement of two national champions and two industrial federal states, namely Niedersachsen and Baden-Württemberg.

In the context of a project of fusion with Volkswagen, Porsche acquired, at the beginning of 2009, as much as 51% of the shares of the Wolfsburg car manufacturer. With the purpose to finance this operation, Porsche piled up a considerable amount of debt, for a total of around 9.5 billion Euros. With the ensuing crisis-related credit crunch, Porsche CEO Wendelin Wiedeking realized that the company had become unable to refinance its debt.

Porsche thus applied for a KfW loan in the context of the measures of the *Konjunkturpaket II*. With initial rumors stating the loan would have been less than one billion euros, the actual amount requested by the company was revealed to be 1.75 billion euros, almost six times as much as the maximum established limit of 300 million Euros and roughly 7% of the amount available in the *Konjunkturpaket II* (Die Welt, 2009a; FAZ, 2009a).

The KfW Vorstand expressed its unfavorable opinion on the loan, basing its decision on the assessment that the Porsche application did not satisfy the requirements. At this timepoint, the KfW official position nevertheless still left the door open, inviting Porsche to work on improving the quality of its application. Meanwhile, the “political” *Lenkungsausschuss* took time to decide, apparently because, according to sources familiar with the matter, the decision was highly controversial and far from unanimous (Handelsblatt, 2009d). At the end, the *Lenkungsausschuss* declined the Porsche request definitively.

If one thinks of public banks as instruments of support to core sectors in a growth model, the decision to decline an application from one of the largest car manufacturers, especially in a condition of financial troubles, may seem at least counter-intuitive. Right for this reason, the Porsche case is a particularly important example of how coalitional politics and “noisy” politics can lead to unexpected results.

This case was indeed evaluated critically, by politicians as well as by the public, especially for the fact that the financial hole was to a good extent “self-inflicted” by Porsche policy of leveraged acquisitions. The political positioning on the case was therefore far from unanimous.

The lines of division within the political landscape were political, but perhaps even more forcefully geographical.

At the national level, many SPD, Greens, FDP, CDU and CSU politicians were opposed to the loan, most crucially the Minister of Finance Steinbrück (SPD) and the Minister of the Economy Guttenberg (CSU)¹⁵ (Nürnberger Zeitung, 2009; Die Welt, 2009b; SZ, 2009; TAZ, 2009a; Handelsblatt, 2009k). Part

¹⁵ This was still the government before the 2009 elections, after which Brüderle would become the BMWi minister and Schauble the BMF minister.

of the concerns raised were that the loan would have figured as a bailout of a financially reckless corporate strategy, on the model of what was already done for banks.

At the state level, the lines of division largely reflected the divisions within the Porsche-Volkswagen duo. In particular, a strong fight ensued between Ferdinand Piëch on the side of Volkswagen, and Wolfgang Porsche and Wiedeking on the side of Porsche (Handelsblatt, 2009e; 2009g; 2009h; 2009i). The fight was mostly a control fight, whereby Volkswagen and Porsche wanted to pursue a fusion by maintaining the respective balance of power in terms of control and their autonomy from each other (Die Welt, 2009c). The struggle for control led to a fracture within the group at the moment of applying to finance for the 9 billion budget hole. In particular, Volkswagen enjoyed a much sounder financial situation than Porsche, and was thus indirectly stuck in a trouble it did not contribute to provoke (Handelsblatt, 2009f).

The clash between the two sides of the new “group” was remarkably paralleled by a clash between the governments of the respective Länder of reference (Niedersachsen for Volkswagen, Baden Württemberg for Porsche) (Handelsblatt, 2009j). SPD and CDU in Baden-Württemberg supported the Porsche application for the KfW loan, considering it the best option among those viable (Börsen Zeitung, 2009).

On the opposite side, the President of Niedersachsen, Christian Wulff, expressed himself against Porsche taking a credit from the KfW (Handelsblatt, 2009j; 2009l). Similarly, IG Metall head Berthold Huber adopted a critical attitude towards the loan application (Berliner Morgenpost, 2009). Predictably, Wiedeking did not react cordially, threatening legal drawbacks for those publicly hindering the application process and discrediting the reputation of the company (Berliner Morgenpost, 2009). Later, Wulff would become more neutral on the matter, reluctantly backing the application, but at that point his true mind had already been spoken (Handelsblatt, 2009k).

Considering the sheer size of the loan, the political divisions on it and the sharp divisions within the Porsche-Volkswagen duo, it should not come as surprising that the loan was rejected. Above all, the threat did not look, or at least it was not perceived by the political level, as existential. No arguments were raised in any source that failing to obtain the loan would endanger jobs or the competitiveness of the group. The issue was resolved with a simple twisting of the balance of power between Porsche and Volkswagen, with the latter absorbing the former as a sub-brand in its group.

Things turned out very differently when it was Opel to require state aid, which could apparently be more puzzling, considering that the company was fully owned by a foreign player: the American manufacturer General Motors.

In 2009, General Motors was particularly hit by the automotive crisis and Opel, as a European subsidiary of the conglomerate, was being considered for restructuring measures. (Handelsblatt, 2009m) In particular, Opel factories in Nordrhein Westfalen, Thüringen, Rheinland-Pfalz and Hessen were seen as potential targets of the restructuring process. Opel thus requested state aid, in the form of guarantees

(*Bürgschaft*), from the German government, opposing the looming threat of a bankruptcy which would have threatened at least 76.000 workplaces in Germany (Handelsblatt, 2009n).

Differently from the Porsche-Volkswagen case, the framing of the problem was thus completely different. On the one hand, the Opel crisis was featured by the daily threat of a bankruptcy and the consequent heavy occupational impact. On the other hand, the crisis was framed as induced by the bad management on the side of General Motors, and as not the responsibility of Opel itself (Handelsblatt, 2009o). As a matter of fact, nowhere in the documentary sources at hand Opel was framed as a national champion in the first place, and conversely the request for state aid rather appeared to be a begging initiative by General Motors.

Different starting conditions thus led to different starting concerns. First, the biggest concern was to maintain workplaces, especially with approximating federal elections in september 2009. The SPD Minister of Finance Steinbrück framed the occupational problem also as a budget issue. Considering that as much as 50.000 jobs (including Opel and suppliers) could have evaporated in the event of an Opel bankruptcy, costs for the social system were estimated to be potentially as high as 2 billion euros (Handelsblatt, 2009p).

The second concern arising from actors across the political spectrum, and especially vocally by the federal states, was the need to unbundle Opel from General Motors (Handelsblatt, 2009m; 2009q; 2009r). Since the situation in Opel was mainly attributed to the bad management of the parent company, the project was to reintroduce Opel in the realm of the German system, by finding an investor who would relaunch an industrial plan for the company and possibly with a solution involving local shareholders.

Despite these two common concerns appeared to be shared across the political spectrum, the request for help by Opel opened very sharp divides within the political elites.

To a certain extent, the dynamics were impressively similar to what was seen for the Porsche-Volkswagen case. Since the outset of the Opel crisis, a political coalition formed around the governments of the federal states where the company had plants and which, with the exception of Rheinland-Pfalz, were all governed by CDU presidents. However, the ground for the coalition was not, like in the Porsche case, the presence of a “home producer”, but rather simply the potential occupational backlash (Handelsblatt, 2009q; 2009r).

The state governments thus appealed to the central government requesting for aid, and some governors and local political figures did not exclude the option of a state shareholding in Opel as a temporary solution while finding other investors for the company (Handelsblatt, 2009q; 2009r; 2009s; 2009t). The state governments offered availability to contribute by offering guarantees or loans, but they expected the federal level to step in, considering the limited local financial capacity (Handelsblatt, 2009t; 2009u). It should be pointed out nevertheless, that, as also happening for the Porsche/Volkswagen case, discussions regarding the need or the methods for assistance also took place within the governing

coalitions of the federal states. The common pattern is that political representatives devoid of decisional power in the matter would express skepticism towards state aid to Opel, in particular local FDP and CDU politicians. As a matter of fact, however, even the critical voices within the Bundesländer were much softer than the corresponding critical voices outside of them.

At the national level, politicians, organizations and representatives of other Bundesländer were sharply divided but generally much more hostile to the state aid request (Handelsblatt, 2009v; 2009w; 2009x; 2009y). In particular, the shareholder option was excluded by virtually any politician outside of the interested federal states. While the CSU and part of the CDU reacted vehemently against the state-aid request, the SPD was initially divided and only later would be more homogeneous in supporting aid to keep the employment levels (Handelsblatt, 2009p; 2009z; 2009a1; 2009b1; 2009c1). The FDP, especially at the local level, appeared to be not opposed in principle to the state aid, provided it would not entail a temporary state ownership and that the aid would support a reliable plan for relaunch (Handelsblatt, 2009t; 2009q; 2009d1)

The government was highly unpersuaded regarding the helpfulness of a potential aid to Opel. Karl-Theodor zu Guttenberg, CSU Minister of the Economy, initially considered the Opel request with urgency, but then turned skeptical on state aid and expressed in favor of considering the possibility of an “ordered insolvency procedure”, finding the favor also of Wolfgang Schäuble (Handelsblatt, 2009a1; 2009e1; 2009f1; 2009z). Chancellor Merkel initially reacted skeptically to Opel request for aid, going as far as to overtly state that Opel was of no systemic relevance for the German industry (Handelsblatt, 2009g1). At a later point, the government would open up to the opportunity of a strictly conditioned state aid and to a temporary facility of “controlled administration” aimed at bridging the company to new investors (Handelsblatt, 2009u; 2009h1).

Among the most closely involved producer groups, the German automotive industry reacted extremely cold or hostile to the Opel requests. Volkswagen and BMW openly expressed opposition to the proposed solution of an acquisition by their own automotive supplier Magna, which would entail the risk that certain confidential information would go to Opel as new competitor (Handelsblatt, 2009i1). Dieter Zetsche from Daimler management also expressed perplexity, despite not considering a strictly temporary state aid as an option to exclude a-priori (Handelsblatt, 2009j1). Some political representatives, especially from the CDU-CSU, attempted to pressure some German Automotive producers, specifically BMW and Daimler, to take stakes in Opel and to invest in a project of a large national conglomerate. Both BMW and Daimler opposed a forceful rejection of such a plan, pointing out that they had to struggle with their own drop in revenues (Handelsblatt, 2009j1). Furthermore, it should be pointed out that the market segments served by BMW and Daimler are radically different from those served by Opel, which targets the mass market, rather than the premium. Kannegiesser, the

head of *Gesamtmetall*¹⁶, also expressed himself against subsidies for Opel, arguing they would have just a distortive function (Handelsblatt, 2009k1). As predictable, trade unions instead strongly advocated for government aid and for employment protection (Handelsblatt, 2009m; 2009o).

Overall, it seems that aid for Opel enjoyed rather scarce political support outside of the local governments where Opel had plants, the unions and lukewarm support by the SPD. Furthermore, the attitude of the parent company General Motors seemed to make the bargaining process even more difficult, for instance when the company asked for a further 300 million aid from the German government, without prior notice and without providing any guarantee of solvency (Bundestag Haushaltsausschuss, 2009)

It is thus surprising that, eventually, Opel obtained a 1.5 billion credit line by the government, 300 million Euros of which were already being paid out in May (Handelsblatt, 2009h1; 2009l1). Originally, the credit line was supposed to come with a plan of General Motors to slowly disengage from Opel, but this was admittedly scarcely enforceable at the beginning and it would not be enforced afterwards.

How to explain this counterintuitive result? The most important explanation seems to have been the sheer unemployment consequences that a potential bankruptcy of Opel would have carried. Here, the realm of the “noisy politics” cannot be neglected, and it would be a concern of German industrial policy even in more recent times (Interview 30). Especially with looming elections in 2009, taking responsibility for thousands of jobs lost and the subsequent earthquake among the suppliers could have had potentially dangerous political effects on the CDU chances to carry the same weight in the new government.

Other concurring factors seem to also have pushed the German government to finally act. First, when the loan was allowed, Opel was starting to find new investors and the German government was actively trying to broker this effort also through the help of the recently acquired Commerzbank (Handelsblatt, 2009m1). With new investors at the door, the loan started looking less as a dead body on the balance sheet of the state. Moreover, the Opel case had European resonance and it could easily be contextualized in a concerted European effort. The UK and the Netherlands had already conceded state guarantees to rescue their domestic plants, while complaints started arising from the Belgian government about the reticence of the German government to help (Handelsblatt, 2009n1; 2009o1).

Nevertheless, the result is undoubtedly surprising, especially considering that Opel ended up obtaining more than it actually was looking for, namely an actual loan, instead of the initially requested guarantee. Moreover, Opel was factually out of the realm of the influential domestic actors of German manufacturing and perceived mostly as a foreign-owned company.

¹⁶ The *Gesamtverband der Arbeitgeberverbände der Metall- und Elektro—Industrie e. V.* (Gesamtmetall) is a large organization representing the interests of businesses from the metal and electric industries.

How to explain the difference with the Porsche case? There are two particularly heavy reasons that seem to have influenced this final outcome. First, the crisis was framed as external from Opel management. It was very clear in the public sphere that, through an aggressive expansion strategy, Porsche had sown the seeds of its own crisis and a potential loan was easily associated with funding corporate reckless wasting of money. Furthermore, the mediatic show that Volkswagen and Porsche gave with their dispute over corporate control over each other's management contributed to nourishing the perception of subsidizing a power struggle. Second, the Porsche case was seldomly framed as "existential" to the company and to the maintenance of workplaces. When it became clear that Volkswagen could step in, there was no urgency for a subsidized loan. Conversely, it was well known that Porsche's crisis was a temporary liquidity crisis.

This latter aspect invites another reflection. When state finance is in the game, discussion is often raised about how the conceded loans or subsidies would look on the balance sheet of the state. As a matter of fact, a substantial state loan was disbursed here to the "weaker" of the two contending parties. This leads to the observation that riskiness of such loans is, as a rule, only a secondary concern.

It is difficult to say whether the fact that the Porsche application had to pass through the Vorstand of the KfW was a decisive factor in this issue. Judging from the sources gathered, this does not appear to be the case. In fact, in the context of the Konjunkturpaket II, the final decision was eventually up to a governmental committee (the *Lenkungsausschuss*), while the Vorstand would just express a nonbinding opinion. To corroborate this further, the Handelsblatt quotes "sources close to the government" reporting that "[d]ie meisten Anträge auf Staatsgelder werden mit einem Empfehlungsschreiben von Politikern eingereicht" (Handelsblatt, 2009p1), meaning that most likely companies who applied already knew that they request had to be directed to political rather than economic fora.

It is worth mentioning that, beyond the large OEMs which were extensively discussed in this chapter, large Tier-1 part suppliers also received government aid. Here also stories of success and failure alternate, but the available sources to evaluate them are much narrower and the amounts at stake remarkably different.

Most notoriously, ZF Friedrichshafen received a 250 million euros loan by the Wirtschaftsfonds. This is a remarkable case, since the company, although experiencing heavy losses, was financially healthy, raising concerns among experts that such subsidized credit would have been used to obtain better liquidity to reinforce the competitive position of the company, rather than for tackling the crisis conjuncture (Handelsblatt, 2009q1; 2009r1).

Conversely, the smaller automotive supplier Aksys failed to obtain a KfW financing of around 20 million euros. This case is nevertheless less comparable to the others, since the amount was not large enough to enter in the political decision-making of the *Lenkungsausschuss*, but was instead decided by the banking bodies. Sources say that politicians from the federal state of Bayern, where Aksys had production

facilities, unsuccessfully tried to lobby for a reconsideration of the case (Handelsblatt, 2009d; 2009p1; 2009s1). Shortly after, Aksys filed for bankruptcy.

The large part supplier Schaeffler represented a similar case to Porsche. The company attempted a risky operation of takeover of Continental AG in the days before the Lehmann Brothers crisis. The offer made by Schaeffler became overpriced, due to the fall of stock prices worldwide, and the company remained with a large package of devalued stocks (Handelsblatt, 2009l). Information on the case is fragmented. Some news agency report that the company requested 1 billion, while others report that the required guarantees could be as high as 4 or 6 billion (TAZ, 2009b; Die Welt, 2009d). Evidence on the outcome of the application process is also inconclusive, but it appears that Schaeffler eventually did not receive the requested guarantees (FAZ, 2009b).

More remunerative was the situation for banks owned by the automotive conglomerates, who were awarded guarantees in the context of the SOFFIN (*Sonderfonds Finanzmarktstabilisierung*), among which Volkswagen alone benefited for 2 billion euros (Handelsblatt, 2009t1; 2009u1). It was noticed that such banks were not considered of systemic relevance and the aid would be used to boost sales of their respective manufacturers (Focus, 2009). It may have been that such guarantees to the *Autobanken* were used as a form of indirect demand stimulation, although the intentionality behind this policy choice was never spoken out.

Overall, these restructurings in automotive were followed by a cut in workplaces overwhelmingly involving the foreign production facilities of the automotive conglomerates and suppliers.

Outside of the direct financial aid disbursed through state financial institutions, the most important and encompassing measure targeted to automotive was the “scrappage incentive” (*Abschrottungsprämie*), which was aimed at stimulating internal demand for new vehicles and, at the same time, to incentivize the switch to better emission-efficient vehicles. Although this represents more a fiscal policy measure, it has industrial policy consequences, in that its main aim was to act as a counter-cyclical intervention against the drop in orders (BMW, 2010b). As a matter of fact, this 5 billion euros-heavy measure (Deutsche Welle, 2009a), and of similar measures elsewhere in Europe, was recognized by the main automobile industry association as having had a determining influence in the 2010 recovery, leading also to a drop in the export quote of the automotive industry (VDA, 2010).

This extensive discussion on the bailout decisions in automotive aids the understanding of state finance in several respects. The two cases of Porsche and Schaeffler show that the connection between being a national champion in a core sector and obtaining policy support is far from straightforward and politically unproblematic. Moreover, the leveraged buyout ventures undertaken by the two groups were meant in a logic of industrial consolidation, and thus could have created more solid and competitive industrial champions, in a logic of consolidation. This was nevertheless not the framing that was given to the Porsche and Schaeffler’s cases. In particular, these consolidation attempts were seen suspiciously

at the national level and raised controversies at the local level. Large players were simply not a priority and their crafting not a sufficient justification to provide financial aid. We will see how this framing would radically change at a later point of the narrative.

The support of the sector is therefore not industrial-political in a developmentalist sense, but rather aimed at maintaining occupational levels. Industrial plans matter only as a guarantee of the future solvency of the rescued company, and not for the effects on the productive structure.

Furthermore, if compared to the multi-billion direct credits that the French state extended to Renault and Citroen, the German direct support to producer starts looking comparatively more modest (Deutsche Welle, 2009)

The structural importance of the automotive industry thus came with employment consequences that were not ignored, although the sector per se did not undergo existential threats, despite being one of the most hit by the conjunctural crisis. Over the next sections, we will see how the crisis for other sectors was managed.

3.7) Alone in rough waters: the shipbuilding industry and the structural crisis of merchant shipping

“Es wäre grob fahrlässig und zukunftsschädigend, wenn eine Exportnation wie Deutschland nicht mehr über die Infrastruktur verfüge, diese Waren dann auch zu transportieren“

(Anonymous shipping company owner, Handelsblatt, 2009v1)

As mentioned above, the shipbuilding industry was undergoing a sectoral crisis that was partially unfolding already before 2009. In particular, pre-crisis German shipbuilding was strongly focused on container ships, which were particularly affected by an overcapacity crisis (VSM, 2011a). The financial crisis nevertheless exacerbated the situation to the point that some shipbuilders were risking insolvency and the sector was at an existential crossroads. The industry value added dropped by 28% in 2009, while the gross operating surpluses fell from 350 million to 1.6 million (Eurostat, 2024d).

The industry could previously rely on some public or para-public banking instruments that were specifically targeted to its needs.

In particular, the KfW-IPEX bank was traditionally heavily invested in the sector, which represented the largest share of its sectoral portfolio. IPEX factually reduced the lending volume for all sectors of 49%, from 17.6 billion (2008) to 8.9 billion Euros (2009). Nevertheless, the volume allocated to the shipbuilding industry fell by a staggering 62%. Two explanations can be given. One part of the story is that the drop in orders had the obvious consequence to reduce investment and thus demand for financing

(KfW-IPEX, 2010). Another part of the story is a purposeful disengagement of the bank from the sector, in light of its high riskiness, thus implying a pro-cyclical investment behavior. This did not happen without a reason. Although enjoying a direct credit line with the parent company, KfW-IPEX was legally a commercial bank, and had thus to abide to banking rules. Increasing the exposure to a sector in crisis, would have meant higher costs in terms of capital to be set aside for risk prevention. Factually, IPEX had to increase dramatically its precautionary capital for impaired and non-impaired loans to 324 million euros in 2009 (only 20 million in 2008) (KfW-IPEX, 2010).

The crisis in the shipbuilding sector also led to the failure of the largest sectoral lender: the HSH Nordbank, a para-public bank which was owned by the states Hamburg and Schleswig-Holstein, the Schleswig-Holstein Sparkasse and the Landesbank West LB.

The financial effects of the crisis on the two main sectoral lenders thus led to an exhaustion of the counter-cyclical capacity of the state-backed financial agencies in this sector, unless government guarantees would be awarded.

However, what was requested by the industry was precisely the extension and strengthening of the financing programs. Specifically, the industry requested that the access to the KfW-Sonderprogramme would be flexibilized and made cheaper (VSM, 2009; Hamburger Abendblatt, 2009). Furthermore, the industry demanded a facilitation to the access to the security market, the extension of the system of state-level guarantees, more ambitious public procurement, export support and the intensification of the efforts in research and development to pursue a high-end competitive strategy.

The government response was hesitant. As a strategic industry, the sector did enjoy some direct subsidization in the previous period, which nevertheless was stopped in 2008, while the financing of interest rate subsidies for new orders would be financed until 2011. The announced “new” line of action was the strengthening of the innovation capacity of the industry. This turned into aid to research and development and innovation, with a total of 170.6 million Euros from various measures planned in the subsequent years (2011-2014) (Bundesrat, 2010).

The management of the crisis was nevertheless patchwork, despite a full-scale collapse of the sector would have had important occupational consequences. In particular, accessing the KfW-Sonderprogramme was difficult in two respects. To begin with, the program was aimed at providing loans to companies that could already stand on their own feet. For shipbuilding, this was a difficult requirement to fulfil, both in light of the sectoral crisis in merchant ships, and for the nature of the sector which, being dependent on few but very large orders, required very large sums in a relatively short time to finance current orders.

The shipbuilder Hegemann-Werften managed to obtain substantial financing only in 2010 and with relevant difficulties, even when facing 500 million euros-worth orders. At the beginning, it could only obtain 48 million euros of state-level finance. Later, a bargaining process including IPEX and NordLB

would ensue, after which the bank would obtain credit contracts for 326 million euros, but only after the government and the state agreed to cover this credit with guarantees (Die Welt, 2009e).

The case of the Wadan-Werften is also open to ambiguous interpretations. From the financial solvency of the company depended 10.000 workplaces and around 250 suppliers (Bundestag, 2009). In March, the shipbuilding company had already obtained a guarantee for a 180 million euros credit from Deutsche Bank and IPEX for current orders, in the context of the Konjunkturpaket I program (Bundestag, 2009; Der Spiegel, 2009). Interestingly, the company obtained help much earlier by the government of the state Mecklenburg-Vorpommern, which provided a 60 million euros credit already in 2008 (Die Welt, 2009f).

Support to the shipping companies, which leased or bought ships from the industry, was also patchwork. The requests to the KfW by Claus-Peter Offen and Döhle for a loan were rejected, while conversely the Hapag-Lloyd shipping company obtained 1.2 billion euros of credit and guarantees by both the national and the local Hamburg government (Hamburger Abendblatt, 2009)

The government also considered the possibility to act through public procurement, but this does not look to have been a decisive factor in the sector's recovery. As a matter of fact, the recovery in the industry was driven by the exporting sector, and especially by the suppliers of intermediate parts, who increasingly oriented towards foreign builders (Interview 09, VSM, 2011a).

In a government report, it was highlighted that, overall, the "maritime industry" benefited particularly from the *Wirtschaftsfonds Deutschland*, with 643 million financing provided to shipping companies and 672 million to shipbuilders, making up 9% of the total volume of the fund, while the KfW IPEX bank provided financing for 2.4 billion euros (Bundestag, 2011a).

Export credit guarantees, that have traditionally played an important role in the shipbuilding sector, were further used to secure financing in crisis times and, in the years from 2008 to 2010, the volume of guarantees for shipbuilding would have raised to an unusual height of around 3 billion per year (Hermesdeckungen, 2010; 2011). Moreover, the government increased the coverage of export credit guarantees from 85% to 95%; a measure that was appreciated by the industry, who would also ask for its temporal extension (Handelsblatt, 2010a; VSM, 2011b). However, even in this field, the support was considered to be rather limited. In its policy requests, the industry pointed out to the fact that foreign competitors were developing large financing plans that put the domestic industry at a competitive disadvantage. This apparently not only included the large Chinese and Korean shipbuilding programs, but also the Italian and French public financing policies, which disbursed state guarantees of the magnitude of until 100%, against the maximum 90%/95% of the German government (VSM, 2010).

Considering the measures, the volume at disposal of the sector does look, in this respect, considerable. To understand the industry's dissatisfaction with the management of the situation one has therefore to look comparatively. In fact, competitor countries, even within Europe, adopted much more assertive policies of sectoral promotion. Beyond the example of export credit, another measure mentioned is the

300 million-worth capital injection of the Italian government in Fincantieri, as well as the 200 million of financing for the modernization of the Fincantieri shipyard in Genua (VSM, 2012).

Overall, the German reaction to the crisis in shipbuilding was thus comparatively mild. Although support was given, this was not deemed to be structural or in a logic of relaunching the sector and boosting demand, but rather in a “defensive” logic of allowing companies to overcome temporary liquidity shortfalls. As a matter of fact, the government would later overtly state that there was no plan to support or relaunch the shipbuilding industry and that the issue would have been left overwhelmingly to the market (Bundestag, 2011b).

3.8) Accelerating adaptation: the crisis and other sectors

Automotive and shipbuilding were the industrial sectors being affected the most by the 2009 crisis, while recovery for other sectors was relatively faster-paced.

The VCI (*Verband der Chemischen Industrie*), carried out a survey where it pointed out that the sector was hit by a fall of demand both in the internal and the external markets, as well as a worsening of access to finance especially for large companies (VCI, 2009a). Interestingly, the survey also highlighted that companies did not see particular improvements from the measures adopted in the Konjunkturpaket I and II, with the important exception of those connected to the automotive and the construction industry.

„Die Mehrzahl der befragten Chemieunternehmen sieht durch die Konjunkturpakete noch keine unmittelbaren Auswirkungen auf die Branche. Eine Ausnahme bilden Unternehmen mit Nähe zum Bau- oder Automobilsektor.“

(VCI, 2009a)

The industry did not seem nevertheless to be particularly concerned with financing, and requests were mostly limited to an ordinary form of industrial policy focused on promotion of research and innovation (VCI, 2009b).

As a matter of fact, the industry did not seem to be radically shaken by the crisis. The debt-equity ratio and the debt ratio of the industry only moved slightly in the years 2008-2010, which can either be interpreted as a sign of little financial distress, or simply as an effect of risk aversion of banks towards companies in crisis. The number of registered companies in the chemical sector even increased in 2009 to 3857, +13% compared to 2008, meaning that a big upheaval is unlikely to have taken place (VCI, 2010; 2011; 2013). What certainly changed is the investment level, which saw a drop of 14% in the year 2009 both in Germany and in the foreign business. In 2010, the inland investment saw a further 5% decrease, while the foreign investment increased by 1.7%.

It would be difficult to tell a univocal story for the machinery and mechanical engineering sectors, in light of their heterogeneity in terms of goods produced and in terms of market situation. More generally speaking, the sectors suffered from the crisis and the reduction of new investment, but did not seem to have undergone a structural upheaval.

A popular case was that of the Heidelberger Druckmaschinen AG, which requested a 550 million Euros guarantee and a 300-million-euro credit, both of which were successfully obtained (Handelsblatt, 2009w1). Further support was given by the states of Baden-Württemberg and Brandenburg, in particular with the goal of maintaining the production facilities in Germany (FAZ, 2009c). Interestingly, the loan was accorded despite the company's financial condition was highly compromised (Handelsblatt, 2009w1).

Sectors that would subsequently be considered as strategic, did not enjoy particular attention at this timepoint. The clearest cases in this respect are those of the chip producers Infineon and its subsidiary Qimonda, which applied for government help in the context of the Konjunkturpaket II. Qimonda's application was rejected and the company ended up filing for insolvency (Focus, 2009). Although the local government of Sachsen considered even entering the company as shareholder, eventually it also withdrew support (FAZ, 2009d, Focus, 2009).

Perhaps even more interesting is nevertheless the case of Infineon, a company that was a chip supplier of systemic relevance for the automotive industry. The company requested a state guarantee of 500 million euros and there is no strong evidence available on the acceptance or rejection of the application (Wirtschaftswoche, 2009). The company grounded the application, among other reasons, with the strong state support enjoyed by the rival STM by the French government.

A more "universal" measure that deserves special attention is the already mentioned expansion of export credit, which was also implemented through the KfW. Although particularly relevant for shipbuilding, export credit measures benefitted a large number of German exporters across industrial sectors (Handelsblatt, 2010a). The measure was further extended in 2010 until 2013 and the volume of the new guaranteed credit was 14 billion euros, which was around 40% higher compared to the previous year. Moreover, at the beginning of 2009, the maximum amount financed per exporter was also raised from 80 to 300 million Euros. The fact that the export credit agency would report that the 80 million volume was very rarely exceeded (Hermesdeckungen, 2010; 2011), gives room to speculate on the fact that this may have been a targeted measure for capital intensive sectors struck by the crisis, such as shipbuilding.

Moving from traditional manufacturing, an account on the crisis measures would be incomplete without addressing the construction sector, whose importance is evident due to its strong cyclical tendencies.

To begin with, it should be considered that the construction industry was not particularly hit by the crisis, at least when compared to the export-oriented manufacturing sector. In 2010, the revenues of the industry were only 4.7% lower than in 2008, while in 2009 the overall investment decreased only by

around 1.5% and the employment levels remain stable at the level of 2008. Interestingly, the great loss of workforce for the construction industry instead took place during the early years 2000s. Within the construction industry, it was the sector of commercial/industrial buildings that suffered the most, while the residential sector was sustaining the overall sectoral performance, and housing units even increased.

The government introduced measures to support the construction sector, albeit in a counter-cyclical, rather than in a structural frame. This mere counter-cyclical use of the sector due to its multiplier value seems to be confirmed by the fact that, in 2008, infrastructural investment slowed down dramatically (HDB, 2009a). The HDB argued that the 23,1% decline in public infrastructure investment in 2008 was driven by the fear of municipalities of lower tax revenues due to the looming crisis (HDB, 2009a).

Nevertheless, 2009 was featured once again by the need to preserve workplaces and, at the same time, the need to upgrade German infrastructure was a salient topic in public debate. Therefore, with the 2009 *Investitions und Tilgungsfonds* (ITF), 20.4 billion were made available by the government, 10 billion of which were designated to public infrastructure investment for the federal states and the municipalities.

Although the construction industry expressed satisfaction regarding the measures (HDB, 2009b; 2009c), they also remarked that their effectiveness was weaker than it was expected (HDB, 2011). Furthermore, one of the few targeted measures for the industry, the *Bauforderungssicherungsgesetz*, which was aimed at shielding construction companies from the risk of bankruptcy, was deemed to be inapplicable and even highly harmful by the construction industry associations (HDB, BVMB, DSTV, 2009).

Overall, although these measures relaunching public investment indirectly benefitted the construction industry, they were not targeted at the sub-fields of the sectors that factually suffered more from the crisis. Rather, two components came into play here. On the one hand, the construction industry has the typical capacity of creating a large number of workplaces in relatively short time. In fact, the main reason given for the 10 billion disbursement is the “[s]trengthening of the growth forces and ensuring workplaces” (BMW, 2010b: p. 77). On the other hand, supporting infrastructure investment is politically palatable, and could figure as a social investment policy rather than a form of support to companies in trouble.

3.9) Industrial policy and company policies: adaptation strategies to the 2009 crisis

The previous section has shown that the overall the use of state finance was far from driven by an automatic responsiveness to the need of the core sectors. Taking the example of the automotive industry, although certainly the sector gained more attention than any other and factually it was the only one to have an ad-hoc measure of demand stimulation (the *Abwrackprämie*), the automotive conglomerates did

not find an overly generous central state. Conversely, it was local politics that appeared to be, almost invariably, standing behind its “home producers”.

However, it should be pointed out that what the German manufacturing industry went through in 2009 was a strictly conjunctural crisis, rather than a systemic competitiveness crisis. Although back then the duration of the crisis in Germany was far from clear, many observers in the secondary sources point to the “financial soundness” of many German companies and to the crisis situation as connected with a temporal need for liquidity. There was no loss in the overall competitiveness and no calls for a systematic industrial policy, with the partial exception of the shipbuilding sector, which was the only one, among those analyzed here, that was going through a real structural crisis.

Although government support to the German automotive industry undoubtedly contributed to avoid that the crisis would worsen and trigger heavy occupational consequences, there was a major process that accounts more for the stabilization of the German core sectors, namely the redirection of German exports to the extra-European markets, particularly in light of an European market being restrained by the policies of budget moderation.

As Figure 13 shows, this was a general tendency across sectors, which accelerated dramatically precisely in the 2008-2011 period. The six selected countries in the figure accounted alone for around 40% of total German exports over the analyzed period. Nevertheless, the weight of each country changes remarkably, with a decline of the Eurozone countries and a dramatic increase of China and later the US. Most importantly, the increase in the Chinese share started becoming much sharper between 2008-2011, the years of the crisis.

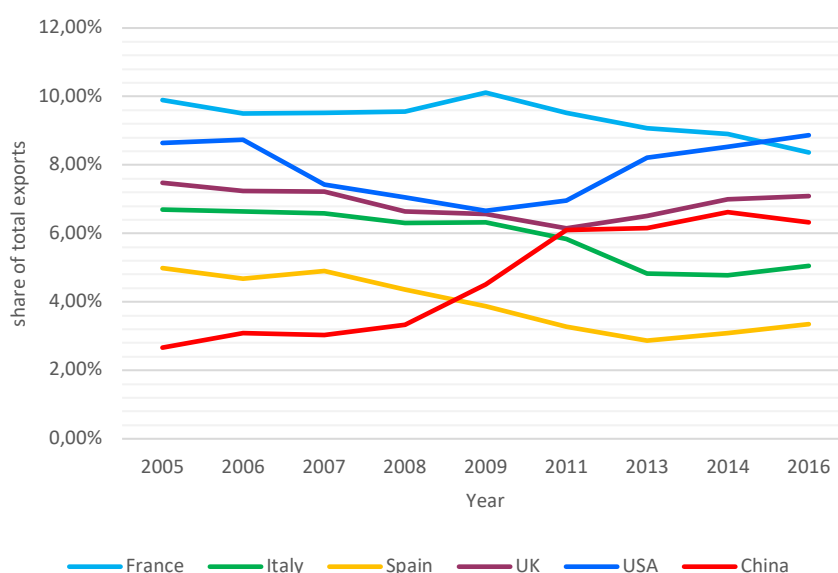


Figure 13 Total German exports: country shares (% total trade) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

When looking at the automotive sector (Figure 14), the increase in the Chinese share is even sharper. Here the seven countries considered make up altogether between 50 and 54% of German exports. The Chinese share raised from slightly more than 3% in 2008 to around 9% in 2011, becoming much more important than all the other European trading partners individually. Observers also pointed out in individual cases, for instance for ZF Friedrichshafen, that the Chinese business allowed some German conglomerates to hire more personnel (Handelsblatt, 2010b).

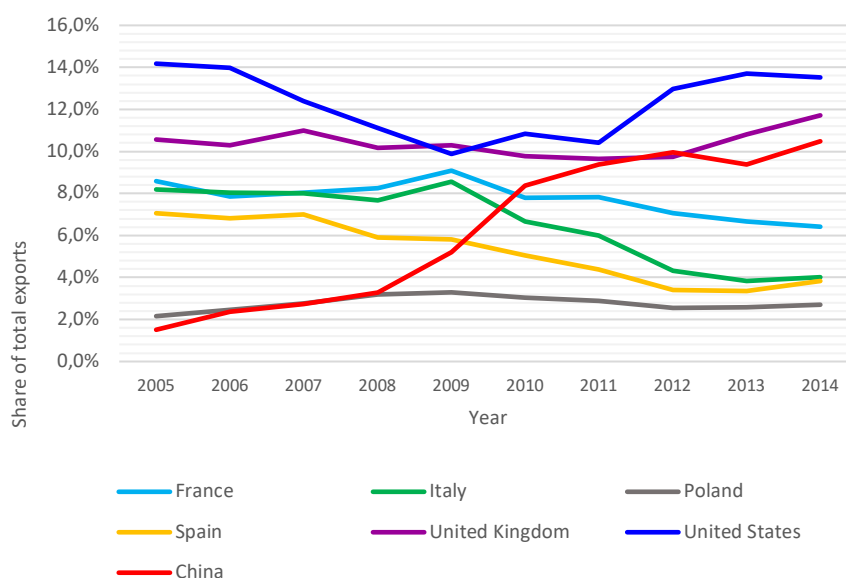


Figure 14 German automotive sector: country shares of exports (%) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

A similar story can be observed looking at the machinery and chemical exports (Figure 15 and 16) where nevertheless, to the growth of the Chinese share does not correspond an equally sharp decrease in the share of the European partners. In both sectors the rising relevance of the Chinese market right in the years of the crisis is outstanding.

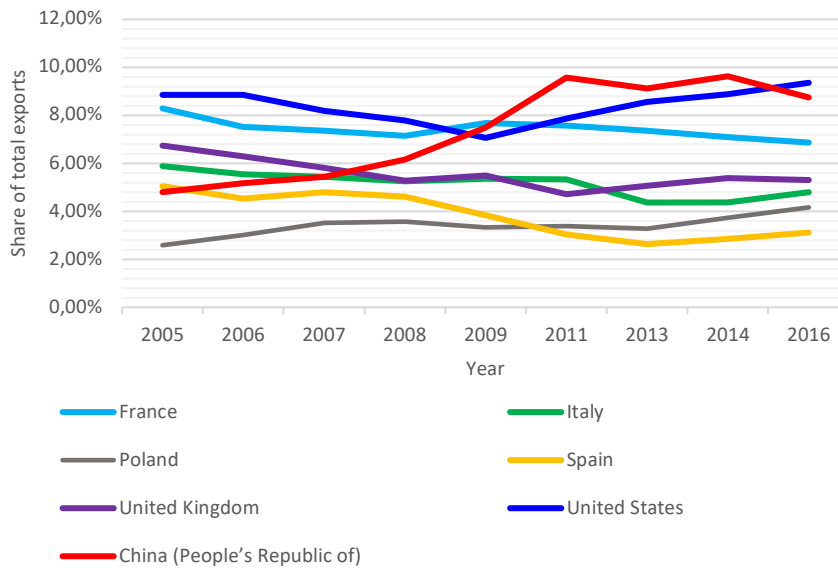


Figure 15 German machinery sector: country shares of exports (%) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

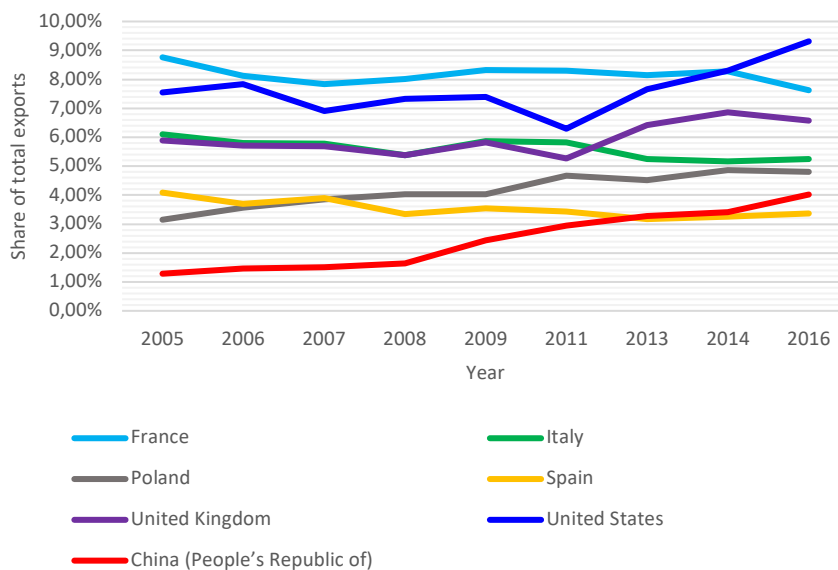


Figure 16 German chemical sector: country shares of exports (%) (OECD Bi-Lateral Trade tables, 2024) (OECD, 2024a)

Considering this “counter cyclical effect” of the Chinese market is, from the point of view of this piece of work, of fundamental importance as one of the determinants of the policy approach in this period. The lack of transformation from a conjunctural crisis to a structural competitiveness crisis did factually reduce pressures on politicians to see the crisis as systemic, and thus reduced pressure for action. Since Germany’s place in the world economy was safe, there was no need to intervene more extensively and

some minimal fixes could easily do the job. From an industrial point of view, the German growth model could continue driving in “autopilot”.

At the same time, the orientation towards manufacturing was clear. As a matter of fact, the *KfW-Sonderprogramme* was equipped with 25 billion euros and appeared to be targeted mainly at enterprises in manufacturing-related sectors, and 50% of the funding volume was disbursed to large companies. In *the Konjunkturpakets I and II* overall, the automotive sector was a clear winner, being the only sector benefitting from a specific demand-stimulating measure of 5 billion euros. Furthermore, the core sectors of German manufacturing definitely benefitted from the already mentioned emergency measures on export credit.

This nonetheless, the crisis was decisively thought of more as conjunctural in nature, and concerns on unemployment took obvious priority in the framing of the responses. Former chancellor Merkel clearly explained the rationale of public intervention in this quotation:

“Wir haben uns als Maßstab gewählt, dass wir möglichst viele Arbeitsplätze erhalten wollen- natürlich nicht gegen die wirtschaftliche Vernunft, aber im Sinne des Bauens von Brücken“ (Focus, 2009)

However, workplaces preservation was by no means a sufficient reason for a successful application by a large company in crisis. Most famously, the very large tourist and retail conglomerate Arcandor AG, which in 2009 employed 86.000 employees (Tagesschau, 2009), was denied any loan or guarantee and it had to file for insolvency, with its segments being split or bought by other investors.

Political struggles would step into the game at the minimum sign of weakness of a loan application. The disbursement of lending to companies in crisis was factually highly controversial from a political point of view and strongly salient in the debate. There was a large part of the political, economic and intellectual establishment that strongly opposed aid and advocated a solution coherent with the *Ordnungspolitik* paradigm. In particular, some economists and politicians argued for providing support only to companies with proper perspectives of future revenues. Former CDU economic expert Michael Fuchs expressed this clearly:

"In diesem Fall sind alle Voraussetzungen erfüllt und eine Hilfe ist okay (...) In anderen Fällen, etwa Porsche, Arcandor oder Schaeffler darf es dagegen keine staatliche Unterstützung geben."

(Michael Fuchs in: Die Welt, 2009g)

In particular, as visible in the Porsche and the Schaeffler cases, it was seen as particularly controversial to disburse public funding for companies whose management wasted money in expensive acquisition adventures. This irrespective of the fact that a fusion between Porsche and Volkswagen would have boosted the creation of an industrial conglomerate, and independently of the previous political support for the fusion project. Strengthening the critical mass of German companies, was, at this stage, not even remotely a political priority.

Furthermore, there was the critique of those who argued that providing money to fundamentally healthy companies would distort the market and create a competitive disadvantage. In this guise was the critique of the retail giant Metro to the Arcandor loan application (Handelsblatt, 2009x1), but, above all, the already mentioned critiques raised to the generous disbursement to ZF Friedrichshafen, which factually did not have an urging need of the requested financing.

This reminder of the contextual “noisy politics” behind state aid should point to the fact that there was no agreement among the political elites on the need for using such instruments to support the German productive structure. At worst, what it was feared were the social consequences of a process of “creative destruction” that would have later found an equilibrium. The only exception was the shipbuilding sector, where the idea that Germany may not remain a shipbuilding country was contemplated by many observers.

Once disagreement would arise, the whole machine of coalitional politics behind certain sectors or companies would ensue, starting from an almost unanimous support of the Länder for their own “local champions”. As seen, automotive mobilized almost invariably local governments and inter-state coalitions aimed either at supporting their local producers (e.g. Porsche case) or at preserving the employment levels (e.g. Opel case). In certain cases, this went beyond the individual company crises and spanned to specific sectors, like the coalition attempts taking place between the governments of Bayer and Niedersachsen in order to extend the governmental rescue-umbrella on the automotive sector more systematically (Focus, 2009). Local politics was almost invariably thus extremely responsive to local producers and ready to engage in sectoral targeted support measures. When such support had to be mobilized at the national level, success instances were instead more mixed.

Therefore, the conjunctural nature of the crisis made so that other political factors could come more forcefully into play in shaping the crisis response of the government. What is important to point out is that the competitiveness perspectives of the core industries of the German growth model are not in discussion in any of the sectors. Lacking a competitiveness crisis, the model just required some ad-hoc fixes, but nothing close to a fully-fledged industrial policy. This also resonates well with the lack of a real systemic view of the core sectors when designing these interventions. When considering again the example of the manufacturing industry, support to Infineon and Qimonda was far from a political priority, despite the important role that these suppliers, particularly Infineon, played for the automotive industry, who would have had hard time to replace the chip supplier.

A more active industrial policy seemed to be out of the game also in those sectors, like shipbuilding, that actively called for a sustained industrial policy and that were in structural crisis, but that did not seem to raise political worries beyond the short-term workplace preservation. Rather the contrary, the previous support of shipbuilding by KfW-IPEX and HSH Nordbank exposed the structural problems of the sector and its potential costs for the public budgets in the form of bank failures. This points to the limits of implementing counter-cyclical policy by using banking means: they become more ineffective

right in the moments in which they are most needed. Moreover, the case of the shipbuilding industry is instructive of the fact that the fact that a sector could be in structural crisis would not grant success in obtaining support. Shipbuilding was a sector of strategic importance, but its aggregate influence on demand was negligible compared to the large automotive clusters.

As can be noticed, this section covered mostly cases of large companies, since the main aim here was to find evidence of sectoral targeting within the crisis packages, while programs for smaller companies tended to be more “generic” and untargeted. However, the extensiveness of the debate that the bailouts of large companies fueled is an important aspect per se. In fact, it appears that having big players to interact with aided the government at least in two respects. On the one hand, they could use the condition of these large players as a proxy for the conditions of the “*Standort*”, namely of the country as a production location. On the other hand, the sheer size of these players made so that aid would indirectly move a much larger amount of demand that would spill over to the domestic supply chain. Opel, Volkswagen, Porsche and the like stood not only for themselves but for a whole cluster, which found somehow in these players their united representation, at a moment where receiving state aid was in the interest of everybody.

This nexus between large producers and the “*Standort*” which, as seen in Streeck (2009) had already been weakened by the beginning of the 2000s, would accelerate its process of erosion in the period after the financial crisis, with the buildup of production capacity abroad and the opening of new larger markets. Before addressing this phase, however, a few remarks on the effects of the crisis on the capacities of German state finance is in order.

3.10) The crisis as a moment of capacity building

Moving away from the ad-hoc industrial measures and the extensive Konjunkturpaket II, the crisis was also an occasion of refinement of some credit instruments in order to promote again a form of horizontal industrial policy based on the idea that the main issue would have been to improve credit availability.

In this respect, a remarkable initiative was the institution, in 2010, of the *Eigenkapitalfonds für den deutschen Mittelstand*. This fund was set up as a partnership between the KfW and the Commerzbank, each of whom contributed with 100 million Euros. Goal of the fund was to provide medium-sized enterprises with equity capital by entering as minority shareholders but relinquishing any claim to active management of the financed companies. The fund was intended for enterprises with revenues between 50 and 500 million Euros, thus excluding small enterprises and, on the other side, the very largest companies. The main goal was to strengthen the capitalization of German companies, which was strongly weakened during the crisis. In particular, the fund management expressly argued that the equity injection should only be aimed at investment financing with growth perspectives, while financing for

buyouts and restructuring was excluded (Darmstädter Echo, 2010). Moreover, the fund clearly expressed the intention to remain invested in the longer term and to particularly address family-owned enterprises who were reluctant to recur to external equity financing for maintaining control over the firm.

Although causation is hard to establish merely based on the available sources, it is hard not to notice the temporal coincidence between the institution of the fund and the bailout of Commerzbank by the government in 2009, after which the government owned 25% of the bank. It seems plausible that there was at least some sort of understanding in the context of the bailout whereby the Commerzbank would have cooperated with the achievement of this policy goal, especially considering that, after the bailout the government would have become the largest shareholder of the bank. This suspicion is even more grounded if considering the fact that the idea for the fund seems to have originated in the government (Handelsblatt, 2010c). Interestingly, other banking groups offered concurring or similar products. The Sparkassen and Landesbanken made available 550 million for a project to reinforce the equity position of the German Mittelstand, while Deutsche Bank offered a concurring fund for Mezzanine capital of around 300 million euros (Handelsblatt, 2010d).

The fund was apparently more successful than similar funds set up by competing institutions, with around 100 interested applicants already by the end of 2010. Although data is not publicly available, Katrin Stark, as director of the Portfolio Management in the corporate banking of Commerzbank, declared that there was a very strong regional concentration of applications in the states of Bayern, Baden-Württemberg and Nordrhein Westfalen, and the automotive sector alone accounted for 15% of applications (Handelsblatt, 2010c).

In the general narrative of this story, the crisis also set the first critical point of expansion of the KfW after the unification. Between 2008 and 2010, 292 new employees were hired (+8%), while total assets increased from 395 billion Euros to 441.8 billions (+12%).

One of the most remarkable parts of the story is how the KfW managed to turn an unfavorable beginning into an asset. As a matter of fact, the KfW was at a remarkably weak position at the outset of the crisis, when it had to absorb, mostly alone, the losses of the IKB restructuring and when it was embroiled in the scandal of the mistaken transfer to Lehman Brothers of 320 million euros (Die Welt, 2009h).

Nevertheless, the urgency of the crisis and the need of a financial instrument able to implement a large lending programme required a type of expertise with lending, risk assessment and the real economy that made the KfW a privileged actor of reference. This contributed to create one of the pillars that would strengthen the legitimation of the KfW also at later points of this narrative: its role as a technocratic implementer of broader policy projects, and as a connector between the micro dimension of finance and the macro dimension of the larger economic policy projects (Interviews 03, 14).

Perhaps most importantly, this is a critical moment at which the KfW started engaging more directly with large enterprises, which are usually out of its mandate. The KfW Sonderprogramme for the

Wirtschaftsfond lent a total of 6 billion Euros, around 51% of which were lent to large enterprises with revenues higher than 500 million per year (BMW, 2010b).

Despite the strengthening of the prestige and role of the KfW, the crisis nevertheless showed a big limit to its possibility as a counter-cyclical tool. As a bank, the KfW was one of the first players to be hit by the financial crisis. This had the obvious consequence of making the bank more risk averse in a moment in which more anti-cyclical behavior would have been required. As a matter of fact, the large counter-cyclical programs came with a very large guarantee from the federal state, meaning that the risk for the bank itself was rather limited. Although it is correct to say that the KfW also works according to a principle of internal cross-subsidization, this is nevertheless only partially the case, since the largest part of its riskiest engagements is covered by state guarantees.

There seems to have been a certain interpretation of the troubles of the KfW at the beginning of the crisis, as a typical manifestation of the perverse effects of policy banking. In reality, what seems to have troubled IKB was its engagement with financial markets and sophisticated financial products, rather than imprudent lending behavior. Nevertheless, this seems to be the point at which the idea of imposing the Bundesbank and BaFin supervision on the KfW started becoming more vocal. This would lead, in the subsequent years, to a process of “professionalization” of the KfW, with the goal of making it more risk averse and more resistant to political pressures (Interview 24).

Beyond the developments connected with the KfW, the unfolding of the crisis and its political management also provide an exemplary observation in how the German system politically reacts to crisis situations. The crisis opened up the way for innovative solutions, although such calls for innovation were scattered across the political scenario. In a state strictly abiding to the *Ordnungspolitik* paradigm, space was opened for calls for temporary shareholding. It is noticeable how the innovation drive appeared to be particularly strong at the local level, where the federal states pushed for more decisive forms of intervention. At this timepoint, these “innovational waves” were short-lived and found strong resistance in national level politics, which tried to abide, as much as possible, to the old paradigm. It will become apparent in the next chapters how diverging structural conditions will affect the ground on which these “struggles for innovation” are played, resulting thus in differing outcomes.

CHAPTER IV

From conjunctural to structural crisis

Apogee and decline of the German competitive edge

Considering the magnitude of the 2009 crisis, German manufacturing and the related export-oriented growth model appeared to be surprisingly resilient. Furthermore, it was clear that the government would step in at least to fix potential inconveniences in the system, as seen in the several bailouts and financial support programs during the crisis. The dependence on export-driven foreign demand appeared more like an asset than a liability, considering that German companies had been able to cope with the depression of the European and American markets by targeting and investing in foreign markets. There was so far no apparent structural threat.

In reality, the global competitive conditions had subtly been changing, although the effects were still not to be perceived in the public debate. The new orientations in terms of green transition and the buildup of a renewable energy network only accelerated some of the contradictions that were emerging due to the fact that increasing industrial capacity abroad, where cost-wise locational advantages were higher, was beginning to put pressure on the margins of the production capacities based in Germany also in those sectors where price competition was traditionally weaker.

This was nevertheless not immediately apparent in the first half of the 2010s, when the industry still maintained its capacity to create value added and where also the construction sector started emerging as an important generator of value added. As can be seen from Figure 17, the value added generated by automotive, chemicals, metallurgy and especially construction was rising steeply for the first half of the years 2010s. The only exception is shipbuilding which lost 20% in value added between 2010 and 2015 and which, as discussed in the previous chapter, was predominantly left to address the structural crisis of the sector alone (Interviews 09, 10).

The second half of the decade started displaying a stagnating trend. It can be noticed that the construction sector stood out as one of the big winners out of this period, continuing its growth trajectory also in the second half of the decade, while the remaining industries decelerated remarkably.

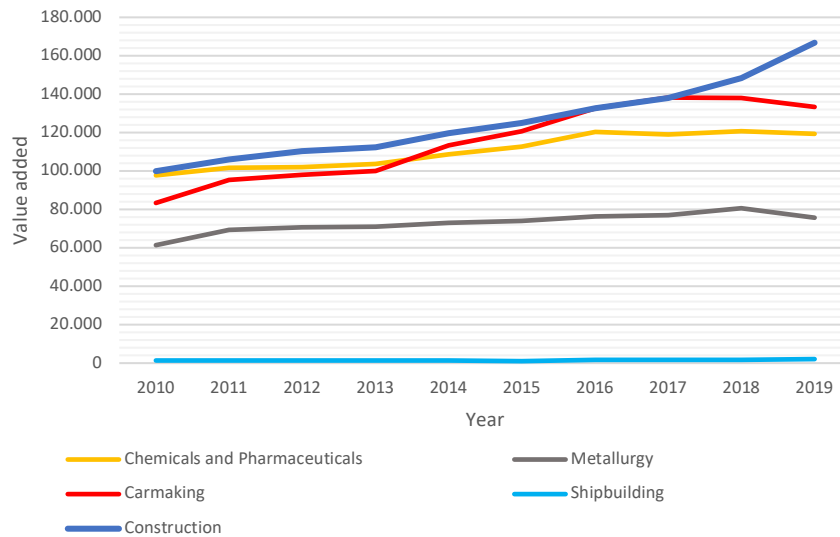


Figure 17 Value added for selected sectors (mln, EUR) (OECD- STAN Database, 2024) (OECD, 2024c)

Considering gross operating surpluses provides a similar, although more nuanced picture. To begin with, automotive held almost consistently the highest position for the whole period except the last few years. Second, the two intermediate supplier sectors, chemicals and metallurgy, display a less smooth development and an earlier declining trend than is the case in the previous picture. A look at the growth rate of gross fixed capital investment provides further shades to the picture. In fact, among the analyzed sectors, only carmaking and construction display average growth rates above the manufacturing average for the 2011-2018 period, while chemicals and metallurgy lie consistently below (OECD, 2024c). It should be eventually pointed out that, despite the higher growth rates in investment, the construction sector lies consistently below all the other sectors in terms of investment-to-output ratio, making it the least investment-intensive sector among those analyzed.

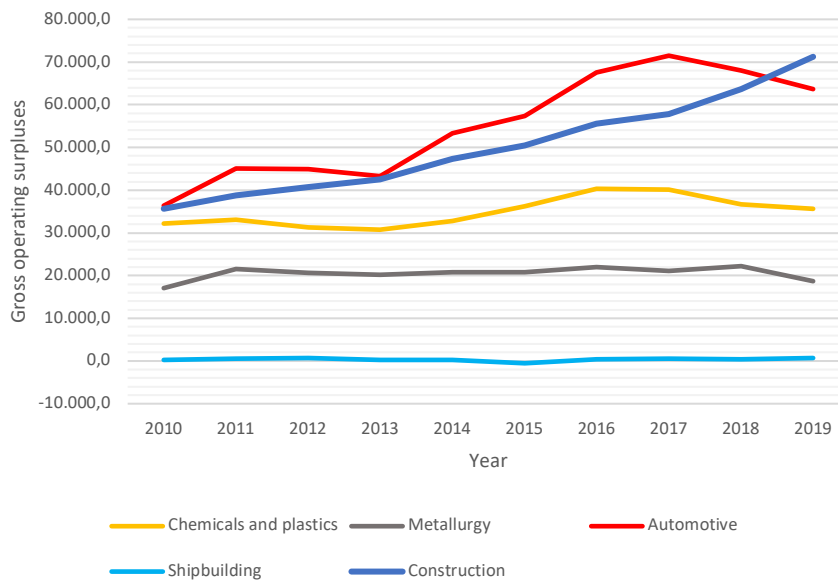


Figure 18 Gross operating surpluses for selected industries (mln, EUR) (OECD-STAN Database, 2024) (OECD, 2024c)

However, even before the second half of the decade, the unease of German industry with Germany as an industrial location (*Standort Deutschland*) intensified. It is at this time that the first vehement calls for industrial policy started coming from the industry and that energy-intensive sectors started engaging in much more vehement advocacy efforts.

4.1) Striving for higher margins: early protectionism, energy costs and the warnings from energy intensive sectors

Since the energy-intensive and intermediate products industries were the first to feel the bite of reduced margins, especially vis-à-vis an increasingly aggressive global competition, it is not surprising that they were also the first to start more actively warning politicians about the problems related to the cost structure. In particular, it was the new energy policy turn towards high targets for renewables that raised the biggest concerns, especially because the intention was to finance the shift through the *EEG-Umlage*, namely additional taxation¹⁷.

The post-crisis outlook of the steelmaking sector looked fairly positive and, by 2010, the sector could be considered to be standing already on its feet, also thanks to the special contribution from steel exports

¹⁷ The *Erneuerbare Energien Gesetz Umlage* (EEG-Umlage) is the system of remuneration, incentivization and financing for renewable energy in Germany. The system works through guaranteed payments (feed-in tariffs), whereby the government provides to renewable energy producers a certain pricing for the energy they produce. This form of subsidization is paid by the electricity consumers. However, energy intensive sectors and companies have usually a special treatment and are granted discounts.

(WVS, 2010a). Nevertheless, dissatisfaction with the government policy approach was repeatedly and overtly expressed, for instance:

“Die Erholung wird weiterhin bedroht durch hohe volatile Rohstoffpreise und eine Politik, die die globalen Wettbewerbsbedingungen nicht berücksichtigt” (WVS, 2010c)

In particular, steelmakers were allegedly disadvantaged by the stricter requirements set at the EU and national level in terms of emissions, and for the higher costs of energy, compared to competitors, particularly China.

The situation in international trade also started turning increasingly critical. Barriers to steel imports and policies fostering the competitive advantages of domestic steel producers were being introduced also in other developed countries, including the US (EUROFER, 2009). Moreover, raw materials supply for the steelmaking sector was made more complicated by the high import-dependence of Germany for metallic minerals. More specifically, at the beginning of the 2010s, the costs for metallic minerals had increased considerably, aided by a set of protectionist measures introduced by the producing countries. As a result, almost half of the German companies using metallic minerals in their production processes, considers to be at a disadvantage compared to competitors from metal-producing countries (Bardt et al., 2013).

Similarly, the chemical industry also took a very critical stance towards the orientation of the government when it came to environmental and industrial policy. Already in 2009, the President of VCI Prof. Dr. Ulrich Lehner would refer to the economic policy of the government in these terms:

„Auf der anderen Seite schafft sie Wettbewerbsnachteile für die deutschen Unternehmen, indem sie durch ihre Biotechnologienpolitik Innovationen verhindert und mit ihrer Klimapolitik die Energiekosten nach oben treibt“ (VCI, 2009b)

And more directly on the industrial policy approach:

„Das Bekenntnis zu einer Politik der sozialen Marktwirtschaft steht dem Bekenntnis zu einer ökologischen Industriepolitik mit einem starken lenkenden Staat gegenüber“ (VCI, 2009b)

By 2010 the topic of an inadequate energy policy for the industry vis-à-vis foreign competition was thus already raised in the public debate, as this eloquent quote from the Handelsblatts shows:

“Die deutsche Energiepolitik ist von Idealismus, Naivität und Selbstüberschätzung geprägt“ (Handelsblatt, 2010e).

The situation turned particularly tense in 2011, when the Fukushima disaster triggered a revision of the government energy strategy and the decision, in May 2011, to phase out the whole nuclear energy production in Germany by 2022.

This decision triggered the immediate reaction from the industry. The organization *„Die Energieintensiven Industrien in Deutschland“* (EID) including, among the others, steelmaking and

chemicals, released a statement in April 2011 for the need of a “[s]ocietal consensus for energy, climate and industrial policy” (EID, 2011). In particular, the joint statement expressed the worries that the energy policy of the government, especially after the decision to phase out nuclear power, would have dramatic consequences on energy prices, thus leading to a loss of competitiveness of German manufacturing.

Although the automotive industry recovered swiftly from the crisis, the VDA also started displaying some forms of interest in industrial policy.

Already in 2010, the head of VDA Wissmann would state that Europe needs an active policy for the industrial basis of Europe, criticizing in particular the new environment and climate protection policy for their introduction of competitive burdens, among which high energy prices (VDA, 2010). Wissmann also pointed to the new forms of protectionism raising abroad, and particularly in Japan and South Korea, which allegedly created disadvantages for the German automotive industry in its attempt to enter those markets.

In particular, the VDA expressed opposition towards the rising energy costs, especially when tax-related, that made production in Germany comparatively uncompetitive. The dramatic tones of the organizations’ policy position went as far as to state that „[w]ird dem hohen und noch weiter steigenden Energiepreinsniveau nicht gegengesteuert, sind eine schleichende Deindustrialisierung und der Verlust von Arbeitsplätzen zu befürchten“ (VDA, 2012: p. 131).

However, the type of industrial policy called for by the industry was fairly limited and can be fundamentally summarized into three main points.

First, the need to keep competitive energy prices and to compensate the energy intensive industries from the costs of the transition. This latter request was particularly forcefully made by the steelmaking industry (WVS, 2010b), and the VDA, which cited a survey by the IW Köln reporting that 34% of the companies were daunted in investing due to high energy prices (VDA, 2018b).

Second, especially the chemical industry stressed the need for an industrial policy focused on promoting research and development (VCI, 2009c). Third, keeping regulation and tax burdens (especially social insurance costs) as low as possible.

Overall, what was requested was thus a classical cost-saving “Standortpolitik”, where the state would be an uncomfortable by-stander. It is considerable to notice that the industry did not make strong claims against wage levels, despite these constituting an obvious disadvantage vis-à-vis emerging industrial powerhouses. The avoidance of this topic may be due to the fact that the advocacy effort of the industry in this period was still based on an assumption that social peace could still be “subsidized” by means of cutting other forms of expenditures. Calls for improved “framework conditions” were thus a less controversial way to compensate some costs disadvantages without engaging in a costly social conflict.

On the opposite, such calls could easily be shared by the unions as well, giving even higher political leverage.

Differently from other industries, the shipbuilding sector argued more forcefully in favor of a more proactive industrial policy that would help the sector face the increasingly unequal playing field set by global competitors, in particular the USA and China (VSM, 2015). This request remained nevertheless widely ignored and the sector was mostly helped through a classical innovation-focused policy aimed at promoting product upgrading that would allow to compete on non-price factors (Interview 09). For this sector, IPEX remained the most importance financier and, despite the post-crisis drop in the lending volume, shipbuilding remained one of the main business branches of the company (Interview 10).

The worries of the energy-intensive sectors were not completely ungrounded. German electricity costs were relatively higher compared to several of the European competitors. Since data for all the electricity consumer's brackets are not available for each country and every year, I will here begin by showing the consumption pattern for the middle bracket of electricity utilization (Consumption from 500 MWh to 1999 MWh). It can be observed that, by the end of 2011, electricity costs had raised by 28% compared to the end of 2007. (Figure 19).

Moreover, 2010 and 2011 seemed to be the years in which the spread between German prices and some of the other competitors increased further.

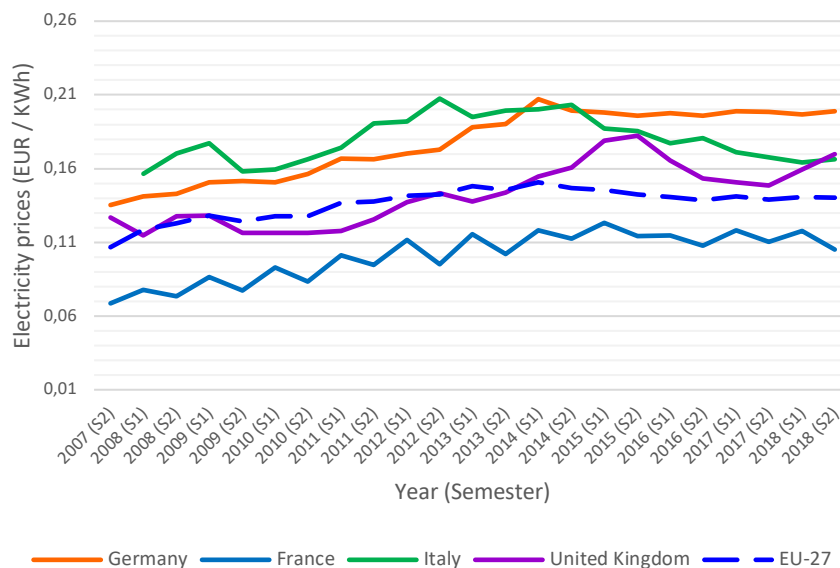


Figure 19 Non-household electricity prices (incl. taxes and levies) in selected countries (EUR-/KWh) (Consumption from 500 MWh to 1 999 MWh - band IC) (Eurostat, 2024a)

Comparing German electricity price levels with those of some competitors may further help provide an overview of this kind of competitive disadvantage. Figure 20 displays the differences in electricity prices between Germany, France and the UK, showing the differences between electricity prices with and

without taxes and levies. The graphs show that the claim of the industry that the reduction in taxes and levies could fundamentally help close the price gap is fundamentally correct especially for the later period of the years 2007-2012, since the proportion of the gap due to taxes and levies had increased with time, while the gap in electricity prices without levies had decreased. A look at the numbers also shows that German electricity prices without taxes and levies started progressively declining since 2009, standing below both Italy and the UK and converging with France.

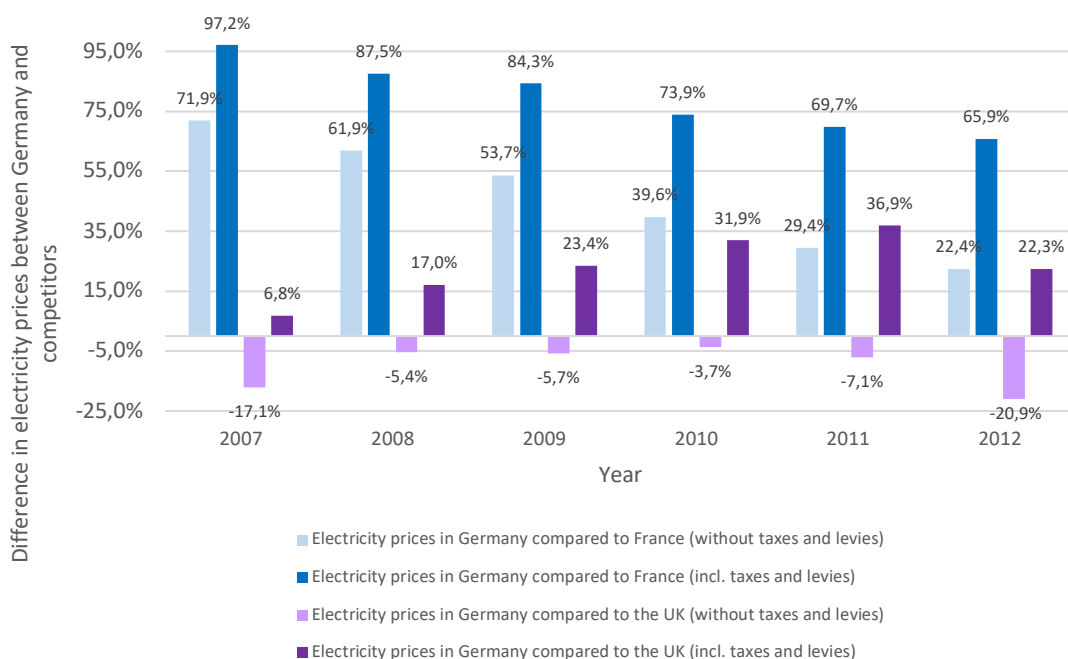


Figure 20 German electricity prices, comparison with competing European countries (% difference) (Consumption from 500 MWh to 1 999 MWh - band IC) (own calculations based on: Eurostat, 2024a)

However, what has been compared so far are price levels in the middle bracket of consumption (from 500 to 19999 MWh – band IC). When considering larger electricity consumers, the picture looks slightly different. Here, electricity prices in Germany are consistently higher than the European average for all the years except of 2012, although being consistently lower than Italy and the UK. From Figure 21, it can be observed that, by the year 2012, the gap was negligible in the case of France and negative for all the other comparisons.

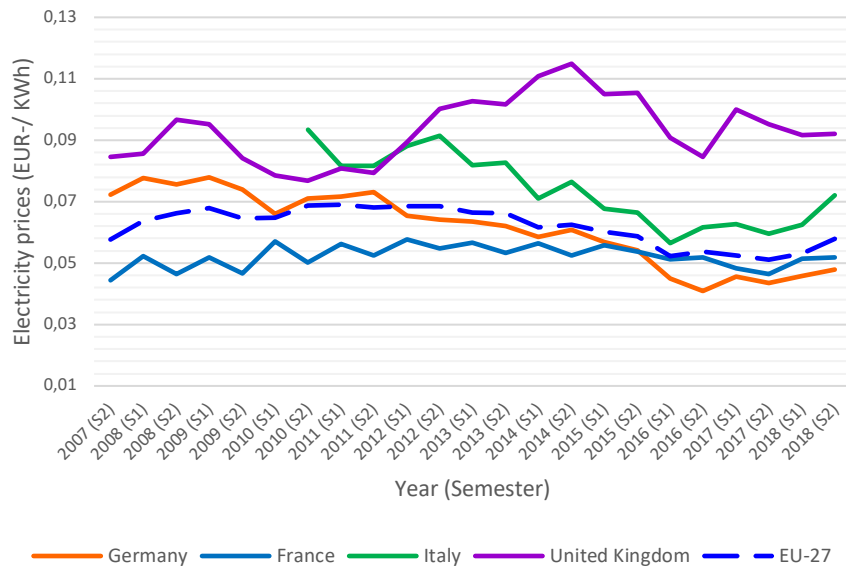


Figure 21 Non-household electricity prices (incl. taxes and levies) in selected countries (Cent-/KWh) (Consumption from 70 000 MWh to 149 999 MWh - band IF) (Eurostat, 2024a)

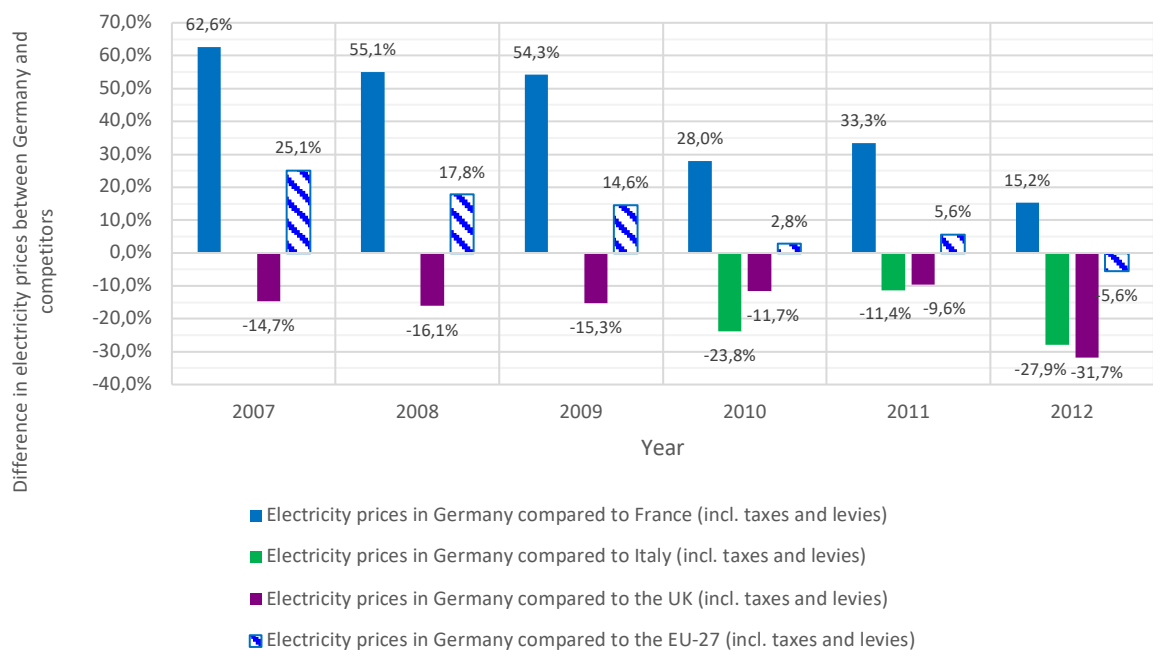


Figure 22 German electricity prices, comparison with competing European countries (% variation) (Consumption from 70 000 MWh to 149 999 MWh - band IF) (own calculations based on: Eurostat, 2024a)

Looking at gas prices, the situation is more nuanced. While German gas prices used to stand at a much higher level, the price gap with the competitors was gradually reduced and, by 2012, it was minimal, although taxes appeared to be systematically higher in Germany than in the other analyzed countries (Figure 23 and Figure 24).

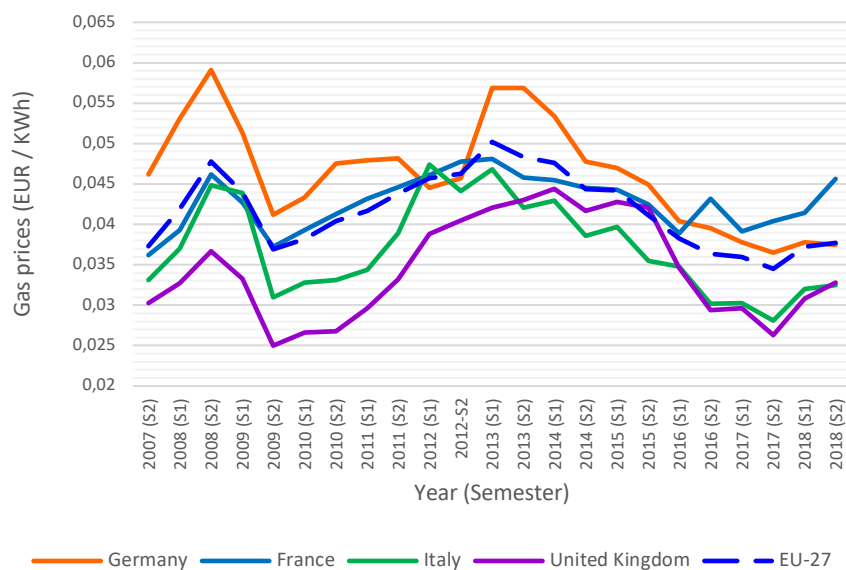


Figure 23 Non-household gas prices (incl. taxes and levies) in selected countries (EUR-/KWh) (Consumption from 10 000 GJ to 99 999 GJ - band I3) (Eurostat, 2024b)

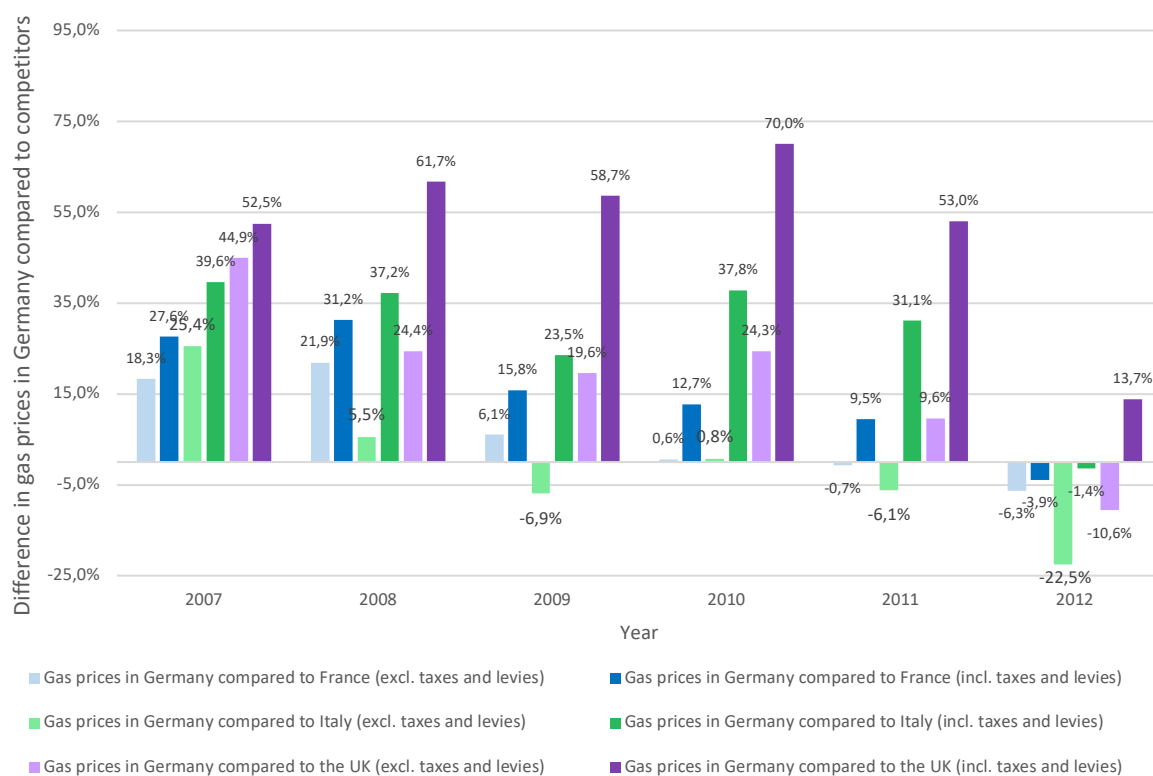


Figure 24 German gas prices, comparison with competing European countries (% difference) (Consumption from 10 000 GJ to 99 999 GJ - band I3) (own calculations based on: Eurostat, 2024b)

The situation for larger gas consumers is fairly similar with a larger early gap which was then sensibly reduced by 2012, although less successfully than what seen for the middle brackets (Figure 25 & 26).

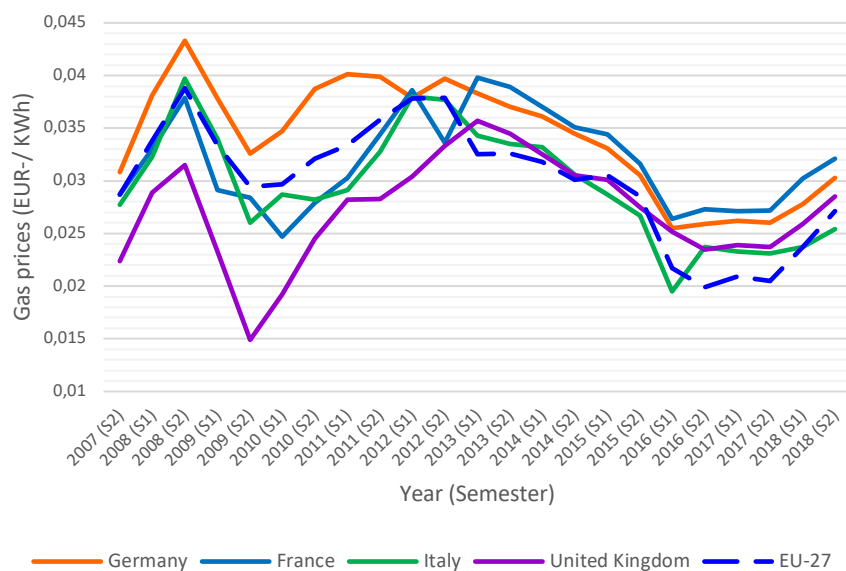


Figure 25 Non-household gas prices (incl. taxes and levies) in selected countries (EUR-/KWh) (Consumption from 1 000 000 GJ to 3 999 999 GJ - band I5) (own calculations based on: Eurostat, 2024b)

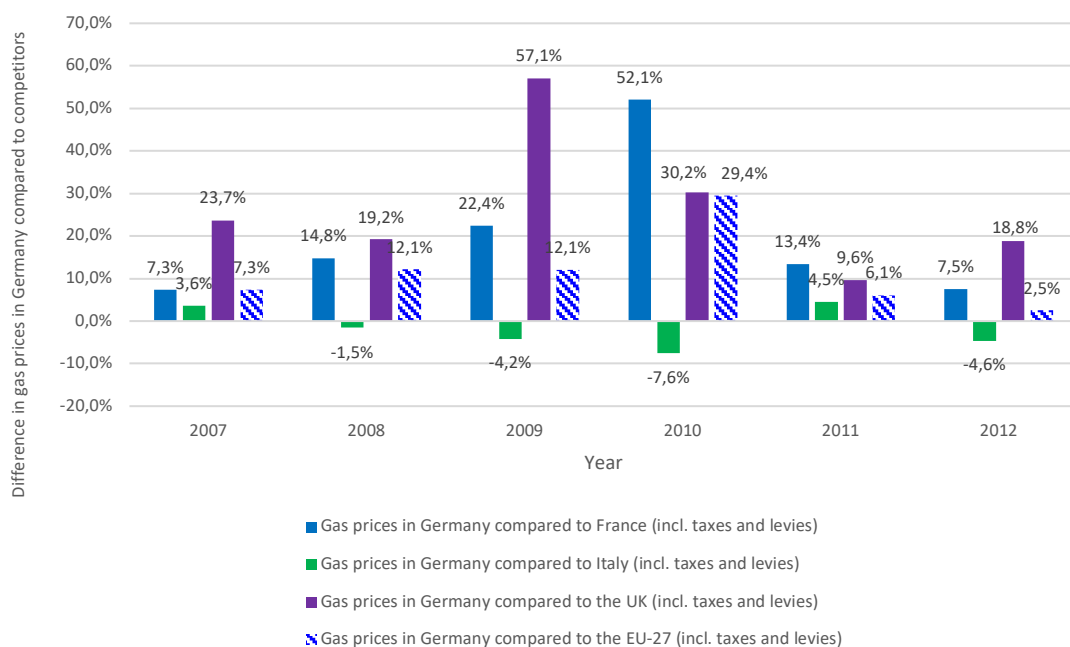


Figure 26 German gas prices, comparison with competing European countries (% difference) (Consumption from 1 000 000 GJ to 3 999 999 GJ - band I5) (own calculations based on: Eurostat, 2024b)

Considering what observed in the graphs above, a few words are in order. The differences in electricity prices were indeed considerable especially at the beginning of the period and taxation played a prevailing role in this disadvantage. Nevertheless, this was especially true for smaller electricity consumers, while larger consumers managed to fill the gap particularly fast. Concerning gas prices, the disadvantage was compensated relatively fast for both consumption brackets.

This points to the fact that the competitiveness gap was especially connected with the German electricity system advantaging larger size companies, which are also notoriously the most export-intensive. Therefore, the problem was not particularly salient across the whole German system, but it was more of a specifically Mittelstand problem. This arrangement of “discriminatory taxation” in favor of the energy intensive sectors led to complaints that went as far as being investigated by the EU Commission (Deutsche Welle, 2013).

This nonetheless, and even considering the higher electricity price disadvantage, it is far from clear whether a reduction in energy prices in the range of the doable would have factually impacted the competitiveness of the Mittelstand. According to VCI data, energy costs made up roughly 4.6% of the total cost structure of the chemical industry in 2013, in contrast to 13.6% of personnel costs (inclusive of social insurance) (VCI, 2015). Especially considering that energy costs include both electricity and gas, and that gas did not display the same price disadvantage, the real advantage of reducing the electricity price gap with other European countries is far from straightforward.

The stress on the issue by the industry organizations may be due to several factors. First, such organizations are certainly more inclined to be more representative of the Mittelstand issues, especially of those strata of the business population who have scarcer opportunities to recur to offshoring. Second, this may express a wider concern of competitiveness vis-à-vis countries where energy pricing was much cheaper, such as the US and China. Competitiveness with other European partners is nevertheless a much more questionable reason, although at times the industry points to this specific comparison.

What is worth stressing here is that the struggle over energy prices appears to be a symptom of a wider and looming crisis that German companies tried to face by cutting down on costs. Since labor did not appear as a politically viable option, energy prices could have been a politically plausible option, able to mobilize a larger range of actors.

Furthermore, survey data provides partial evidence of a decrease in salience of energy costs in the 2010s. According to a survey carried out by the *Institut der deutschen Wirtschaft Köln* (IW Köln), high energy costs were considered as a strong deterrent to investment by around 50% of the responding companies in 2015, making it the second-highest daunting factor after “uncertainties in the world economy” (Bardt et al., 2015). In the 2017 version of this survey, high energy costs were considered as a strong deterrent to investment by 38% of the interviewed companies, while personnel costs and lack of qualified

personnel accounted for roughly 45% each, and heavy regulation for slightly more than 50% (Bardt et al., 2017).

Although the industry was evidently attempting to strive for margins domestically, an analysis of the motivations underlying foreign investment in this period leads to certain qualifications.

The yearly survey by the German Chamber and Industry and Commerce provides an overview regarding how the reasons underlying foreign investment developed over time (DIHK, 2024: p. 4). It can be noticed that, while cost saving was the reported reason for foreign investment by more than 40% of the responding companies in 2004, this percentage had consistently dropped until 2013, when the value reached its low of 20%. Conversely, reasons related to opening new markets and serving customers abroad increased to 35% and around 48% respectively. From 2013 onwards, the trend reversed, and cost savings are gradually but consistently rising as a reason to invest abroad. It is also considerable that cost savings were reported more frequently as a reason to invest abroad, from 2014 onwards, particularly vigorously as a reason for largest companies, rather than for the smaller ones.

This trend in the reporting of “costs” as a reason to invest abroad is open to different interpretations. One possibility is that German industry was undergoing, before the crisis, a period of foreign expansion connected with rising foreign demand and the opening of new markets, which entailed the buildup of productive capacity abroad to abate logistics costs and provide flexibility in delivery times. A second possibility, is that the German companies were experiencing weaker competitive pressures on prices in this period due to the competitive edge. Clearly, one does not exclude the other. Independently of which explanation we decide to adopt, the rising of the cost saving motive from 2013 afterwards may be an epiphenomenon of a struggle for margins in a period of higher competition intensity on costs.

4.2) Shoddily-designed policy attempts: raw materials, energy and R&D policy in the post-crisis period

Presumably also as an effect of the mentioned calls by the industry, a certain government awareness and some embryonic forms of support started being introduced, specifically in three fields: raw materials, energy policy and innovation policy.

It is in 2010 that the first “Raw Material Strategy” (*Rohstoffstrategie*) was introduced by the government, with the goal to obtain certainty in the supply of raw materials at competitive prices (BMWi, 2010a). Among the routine “grocery list” statements regarding the importance of the topic and the “political support” that the government intended to ensure, there are two more specific issues that deserve attention at this timepoint.

First, the issue of export controls by raw material exporting countries was addressed as a problem ensuring delivery of raw materials in a period of higher demand for such factors of production. This points to the fact that the disturbances in global markets that will later become particularly salient in the industrial policy debate were factually already appearing in the post-crisis period, where the industrial demand spurt, especially from the large Chinese market, started to make the access to such resources particularly competitive.

Second, the government made available special guarantees for raw material projects abroad, under the *UfK (Garantien für Ungebundene Finanzkredite)* and the *Hermesdeckung*. The government realized that the domestic raw material industry abandoned almost completely the extracting activities abroad and that such activity could be undertaken only by few corporations which nevertheless lacked the capital basis for undertaking projects of that size. Therefore, the government committed to provide some form of exploration financing or repayable loans, in order to introduce incentives to projects involving such risks and high costs.

Regarding energy policy, a considerable number of resources were mobilized to do so that the energy transition would not backlash dramatically on the competitiveness of the German industry. When it comes to the state finance mobilized, the objectives were to promote energy efficiency, increase the production of electricity out of renewables and to ensure the supply of cheap gas to the German industry.

With respect to natural gas, it is notorious the expansion of Nord Stream 1 into, Nord Stream 2, which started with a second financing round where the German government kept ensuring the access to guarantees (Nord Stream, 2011).

An important step is the institution, in 2011, of the *Sondervermögen Energie- und Klimafonds (EKF)* (since 2022 called *Klima- und Transformationsfonds, KTF*). The EKF was initially mandated to promote energy efficiency of buildings, international projects, subsidies to energy-intensive companies, electromobility programs and programs to promote renewables at large. It was planned that the fund would spend 300 million in the first year and a total of 3.2 billion by 2015. For the standards of previous deployment of state finance, this looked already as an ambitious project.

In parallel, the KfW was mandated to increase its engagement in the field of climate and renewables with the “*KfW Aktionsplan Energiewende*”. As already shown, the KfW programs played an important role previously as well, although decisively more oriented towards an “energy efficiency” paradigm, rather than an “energy production” one.

Furthermore, the KfW also continued the expansion of its competences beyond the usual SME customers. Energy efficiency programs were extended to larger companies and the highest amount for individual loans was increased. Moreover, the 20 years long timespan of interest rate fixing provided for easiness in planning these kinds of investments. Eventually, in 2013 a new program for heating generation out of renewables would be introduced.

The fact that the volume for the KfW environmental programs dropped in 2011 to 10.8 billion, from the 11.1 billion of the previous year, should not deceive, since these programs were established in 2011 and thus should be evaluated based on the subsequent year. The funding volume was thus increased to 12 billion in 2012. The government also made 300 million euros available for supporting the “*Energieeffizienz Sanieren*” program with a subsidy variant. Conversely, the programs promoting home ownership and home modernization dropped dramatically in funding volume in the three years analyzed. For municipalities, the program “*Energetische Stadtsanierung*” was also introduced to promote renewables and energy efficiency.

As a further instrument, the KfW started in 2014 to promote the creation of a market for green bonds, setting an initial target of 2 billion euros in emissions. In this function, the KfW intended to promote the asset class of green bonds as an “investable” asset class by private investors. At its outset, the program would mainly be used to finance bonds related to green energy production, but later, in 2019, its reach would be extended to measures of energy efficiency, which then would make up until 80% of the emission volume (KfW 2016b; 2017b; 2018b; 2020b; 2021b; 2022b; 2024b). Interestingly, consistently more than 80% of the electricity generation funding financed wind power.

This bias towards wind energy leads to the observation that, when it comes to clean energy production, the government very clearly decided to promote wind energy at the expenses of the solar industry. For how paradoxical it may sound for a renewable energy plan, the solar panel industry ended up being on the losing side of the measures for renewables capacities building.

This change in orientation factually started already in 2009 with the first EEG reform. To begin with, the 2009 reform reduced the feed-in-tariffs (FiTs), namely the compensation for energy introduced in the system by solar energy producers, especially for larger installations. The creation of large plants was further discouraged by the introduction of a threshold size after which the FiTs would further decline.

The subsequent 2012 changes in the EEG were thus just the final strike to the sector. These implied a further reduction in the FiTs, more frequent adjustments of their amounts, the introduction of FiT caps on larger solar installations and on ground-mounted systems and other measures aimed at limiting the growth of solar panels installations. Overall, these measures had the effect of discouraging investment in solar installations, since they reduced the monetary rewards and made the planning of future investments more difficult by creating strong unpredictability. The alleged political reason for this was to avoid that the FiTs system would weigh heavily on the final electricity bill, but the lack of the replacement with other promotional instruments makes easily think that the government did not have particular interest in the industry’s fate either. In particular, the industry experienced a wave of bankruptcies at the end of 2012 (Deutsche Welle, 2012), which also points to the fact that the government did not think twice before lifting support from an industry that still relied on the domestic market and procurement policies to grow.

While the importance of the solar panel programs declined in the KfW, allegedly as an effect of the policy changes (KfW, 2013a; 2014a), wind power seemed to have been actively promoted. The KfW introduced a new program for Offshore wind turbine parks, partially managed by the project finance section of KfW-IPEX. This allowed the KfW to finance one of the flagship wind power projects, the “*Offshore-Windpark Global Tech I*”, through syndicated financing, namely the creation of a consortium of investors.

The project seems also to have had the unstated goal to promote the local manufacturing capacity of wind turbines. The manufacturer of the turbines was indeed the German company Multibrid, which was bought, in 2007, by the French energy company Areva and renamed “Areva Wind”. Later, Areva Wind would become a joint venture between Areva and Gamesa, which would then be bought, in 2014, by Siemens Wind Power. Similarly, the 2016 offshore wind park in the British city of Dudgeon employed Siemens-produced wind turbines (KfW-IPEX, 2017). Construction company giant Hochtief was also involved in the project. Whether this is part of a consistent procurement-connected industrial policy in order to promote the development of the wind power industry is still unclear.

In such kinds of financing operations, IPEX often does not only play a co-financer role, but also acts as an initiator, avoiding thus that the bank would undertake too much risk alone. The consortium for this project included commercial banks, the European Investment Bank and the KfW, for a total funding volume of 1 billion Euros.

However, the extent to which the redirection of incentives away from solar power was coupled with a promotion of a wind power program, leaves room to imagine that one of the solutions was favored. It is also hard to establish the direction of the causation between the decision of the giant Siemens to focus on wind energy exiting the solar panel sector, and the government decisions to lift incentives to solar energy. In light of the reported informal connections between politics and large conglomerates that were mentioned in some interview sources (Interview 18), it would be hard to think that such considerations did not play a role, particularly given that an export giant like Siemens decided to leave the solar market at that precise time.

The third big aspect of competitiveness policy concerning state finance in this period is the promotion of innovation and investment in technological upgrading. This stronger orientation in this direction started with the “*Innovationskonzept des Bundesministeriums für Wirtschaft und Technologie*”.

In order to enforce this agenda, the Mittelstandbank section of the KfW started being more directly focused towards innovation finance, with four new programs established between 2012 and 2013: the *KfW Gründerkredit Universell*, *KfW Gründerkredit Startgeld*, *Beteiligungskapital für Wachstum, Innovation und Nachfolge* (WIN) and the “*ERP-Kapital für Gründung*”. Moreover, the credit amount covered by the KfW for the “*ERP-Gründerkredit*” program was raised to 80%. While most of these programs were aimed at fostering the development of the German venture capital market, the WIN

program additionally addressed general investment needs and the bridging of family-owned companies in the succession transition. According to interview material, this program was particularly important for SMEs and would subsequently be politically contested (Interview 25).

The effectiveness of the creation and expansion of these programs was however, strongly limited by lower demand for innovation finance, which is explained with a better post-crisis capitalization of German companies (KfW, 2013a). This is useful again in order to point out that the lending volume does not always reflect political priorities, but also demand-side factors.

4.3) Re-setting the KfW and the ambiguous position of IPEX

The KfW subsidiary that is usually concerned with larger customers is KfW-IPEX, which is also the project finance and export credit branch. In this period, KfW-IPEX, was also redirected more forcefully to its role as supporter of the competitiveness of the German economy both through its project finance activity and through its export credit programs (KfW, 2013a; 2014a). Sectors that are mentioned to benefit from IPEX activity include automotive, mechanical engineering, pharma, electrotechnics and shipbuilding.

Beyond forms of indirect public procurement, like mentioned for the wind parks activity, the KfW-IPEX was also tasked with intervening in project finance by dealing with the infrastructure gap not only within Germany, but also abroad. As written in the KfW reporting:

“Das Zusammenwachsen der weltweiten Märkte erfordert eine belastbare international Infrastruktur. Dies unterstützt die KfW IPEX Bank mit ihren Krediten für den Ausbau von Straßen, Schienen, Energie und Datennetzen sowie See und Flughäfen. Daneben finanziert die Bank Investitionen in Flugzeuge, Schiffe sowie Schienenfahrzeuge” (KfW, 2014a).

However, IPEX stands out as particularly interesting because of its ambiguous position within the KfW structure. On the one hand, the bank was turned into a private commercial bank. On the other hand, this purely commercial nature of the bank is questioned not only in the official documentation of the KfW, but also in the ownership structure, which leaves the bank's total ownership within the KfW.

This points the spotlight on a very peculiar achievement of this arrangement, namely that IPEX has managed to play its role as an industrial policy instrument while at the same time working as a big profitability driver for the overall banking conglomerate. Looking at the results of the export and project finance business field of the KfW, the tendency seems for this section to have been a driving force behind the profitability of the promotional bank. Whether this makes a case for this section cross-subsidizing other activities of the bank is not straightforward, but seems to be likely, especially when considering the ratio between IPEX profits and the overall profits of the KfW conglomerate. As a rough estimate of

IPEX relevance for the overall results of the KfW conglomerate, the relationship between the final result of the export and project finance section and the KfW conglomerate overall profits can be useful. As can be seen, this percentage constantly oscillates between 24% and 37% in the post-crisis period, making up consistently the first or second largest driver of the bank positive results.

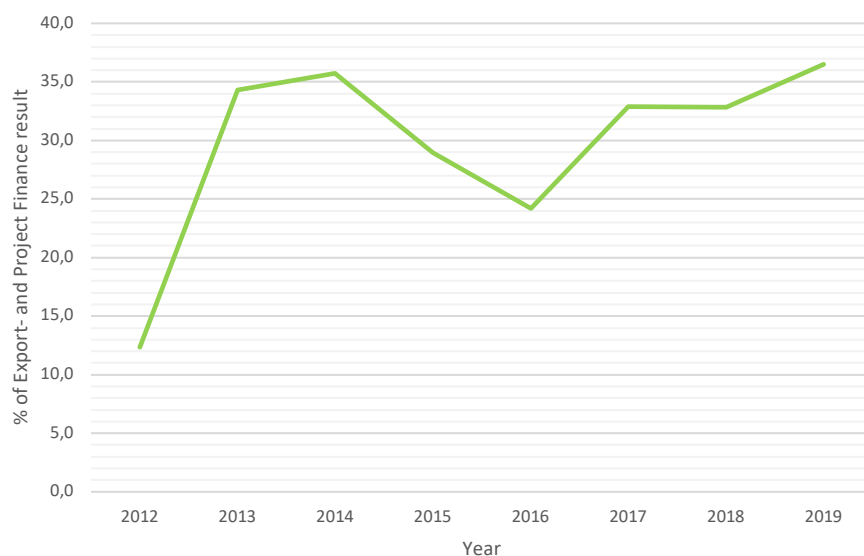


Figure 27 Percentage of IPEX surplus related to the total KfW surplus (own calculations based on: KfW-IPEX Annual Reports, 2016-2023)

The result is even more remarkable considering that IPEX operated, in the post-crisis period, in a context where lower interest rates had made export and project finance a much more competitive field, meaning that the bank, being primarily a commercial bank, would have to count on higher pressure on margins (KfW, 2014a, 2015a).

Beyond being profitable, the involvement of IPEX in project finance is in fact highly meaningful from an industrial political point of view, for instance in the implementation of the energy plan, as already shown by the examples of the offshore wind parks projects.

The redirection of IPEX towards the electricity sector is rather evident when looking at the sectoral distribution of its lending activity. In Figure 28, where the development of total assets over time is displayed, it can be noticed that the share of the Energy and Environment sector steadily increased over time. While this share stood at around 17.2% in 2011, by 2022 it had raised up to 22.5%. Conversely, the share dedicated to shipbuilding and naval transportation industries fell steadily starting in 2016.

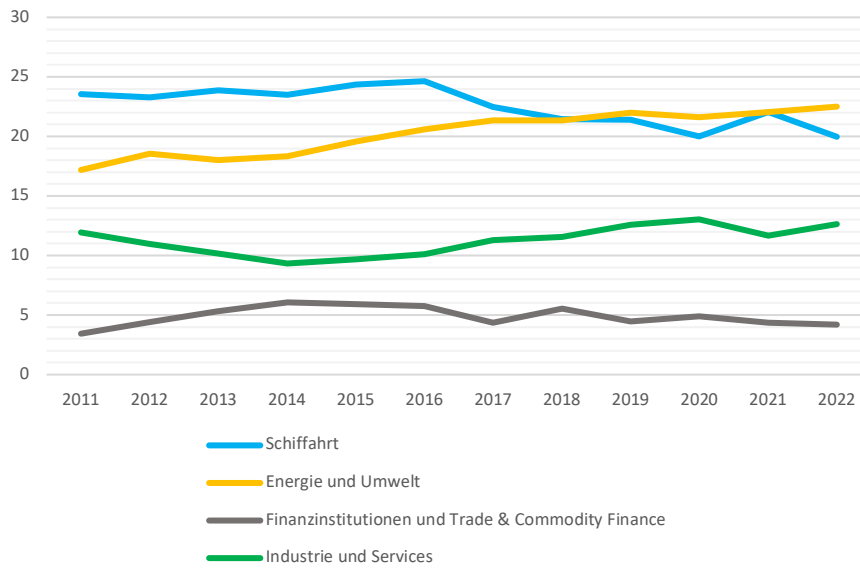


Figure 28 Share of IPEX assets in four selected sectors on the total KfW-IPEX assets (KfW-IPEX Annual Reports, 2012-2023)

When considering the yearly lending volume (Figure 29), namely the new financial commitments of IPEX to different sectors, we see this trend much more clearly. While the yearly financing in the naval industry dropped dramatically as a share of total commitments, the energy and environment sector tended to remain at higher levels than all the others from 2016 onwards.

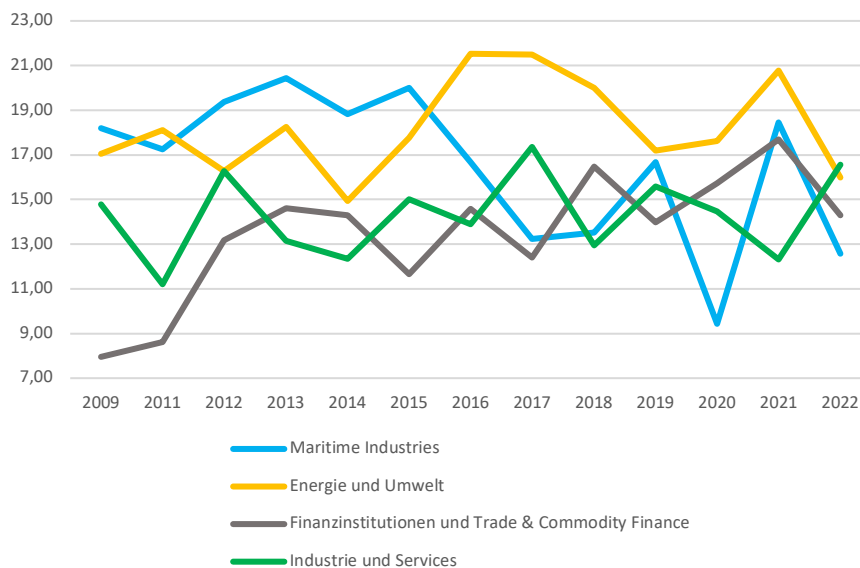


Figure 29 Yearly lending share of four selected sectors on the total of IPEX new commitments (KfW-IPEX Annual Reports, 2010-2023)

The role of IPEX for the naval and the shipbuilding industry makes up a case of special interest. In the KfW reporting it is stated that IPEX would gradually reduce or carefully manage its exposure to the industry, in light of the crisis in shipbuilding, which made the bank cumulate a high amount of risk (e.g. KfW-IPEX, 2018: p. 51; KfW-IPEX; 2017: p. 49). As seen, this was factually implemented, although IPEX remained the largest reference point for the shipbuilding industry in the post-crisis period, when regular banks would just be too reticent to lend money to the industry (Interview 10). Maintenance of a promotional function? Not quite. IPEX seems to have factually entered and maintained presence in the most profitable segments of activity within the shipbuilding sector, rather than those that actually suffered from the crisis of shipbuilding the most (Interview 10). The role for this previously fundamental business activity of IPEX seems thus to be ambiguous: largest lender on the one hand, profit-maker on the other.

The graduality with which IPEX decreased its investment in shipbuilding also stands out as interesting. Although this graduality can be interpreted in different ways, it is reasonable to interpret it here as a sort of ordered withdraw of IPEX from activity branch, which represented a substantial burden in terms of precautionary capital. It should be pointed out nevertheless that the shares displayed only pertain the commercial activity of IPEX; while for instance the “CIRR-Schiffahrt” program, which is administered and guaranteed by the government, is not included. This program mobilized between 0.7 and 1 billion per year, pointing to the fact that, rather than a government policy shift, the withdrawal of IPEX was rather a way of leaving the burden of the risky sector to the government budget in the frame of a special program.

However, the new focus on energy, consistent with the governmental goals, is an evident development, which promoted not only wind power generation, but also other large projects for energy and electricity infrastructure.

As an example, IPEX was an importance financier, together with the European Investment Bank and the “Norwegian Statnett”, of Nordlink: a large project devising the connection, through underwater high-capacity cables, of the German and Norwegian electricity networks. More specifically, the idea was to make so that the two countries could complement their renewable electricity networks so that the German system could buy from the hydroelectric sources of Norway, while Norway could buy from the wind power sources of Germany. The main goal was to stabilize the provision of renewable energy and, for Germany, to ensure access to renewable energy production in Norway.

Further projects such as the expansion of the Melbourne Dockyard, the investment in the domestic data centers expansion, and the domestic highways are also further IPEX undertakings framed as creating the infrastructural conditions for a world competitive export sector.

This strong focus on energy and competitiveness enhancement apparently came at the expenses of the KfW products for the promotion of home ownership, which decreased in political salience in this period.

The program “*Wohnraum Modernisieren*”, which before the crisis mobilized between 3 and 4 billion euros annually, was terminated in 2011. The program for the promotion of home ownership however remained, between 2012 and 2017, stable in terms of funding volumes around 5 billion per year and around 9-10% of the overall funding volume (KfW, 2018a). The reason for this discrepancy between political priorities and the stability of funding may be due a possible increase in the demand for the program in light of the growth of the construction and real estate sectors that Germany started experiencing after the financial crisis.

In fact, from 2011 until 2019, the construction industry experienced a consistently positive growth in revenues and value added (OECD, 2024c; HDB, 2019).

“The German construction industry has 10 golden years behind it”

(Interview 39)

Perhaps most importantly, while before the crisis the trend was for construction investment to drop and GDP to grow, after the crisis construction investment started growing roughly at the same pace as the overall economy. This trend was not homogenous in the whole construction industry. In fact, the residential sector was driving the growth in revenues by far, compensating for a stagnating public and industrial construction investment. To take just an indicator as an example, the amount of completed multi-family residential buildings per year grew, between 2009 and 2019, by 162%, while the amount of the orders even tripled in the same period.

Seen from this perspective, it is rather surprising that the KfW program’s funding volume did not increase, especially considering that, as shown in Figure 29 and 20, the banks’ total assets in residential mortgage finance increased by 35% between 2011 and 2019, while the yearly volume of new residential mortgage loans increased by 40.5 % in the same timespan. As a final illustration, Figure 33 shows the proportion of the KfW program for home ownership on the new residential mortgage lending in different years. As can be seen, the proportion of KfW funding dropped sharply between 2008 and 2021.

A competing explanation for the proportionally lower lending volume is a demand-side one, namely that, with lower interest rates ensuing (Figure 32), the demand for subsidized finance dropped also in light of the greater difficulty for the KfW to pass the interest rate advantage forward to the final borrowers, a problem that was also pointed out in KfW reports. Not having data on the number of rejected applications over the years, it is hard to assess the extent to which demand-side explanations may play a role here. Nevertheless, the observed data, together with the documental and interview evidence, give at least a good guess about the fact that the program lost in political relevance. Furthermore, KfW documents give at times mixed signals regarding the demand situation for housing programmes. For instance, the KfW report for the year 2017 mentions demand for housing programs to be high (KfW, 2018a).

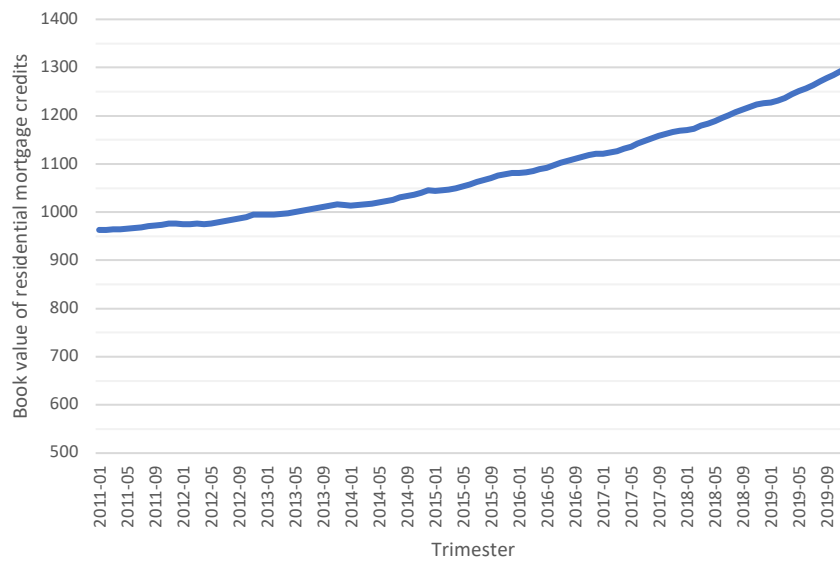


Figure 30 Total book value of bank credits for residential mortgage finance (bln, EUR) (Bundesbank, 2024a)

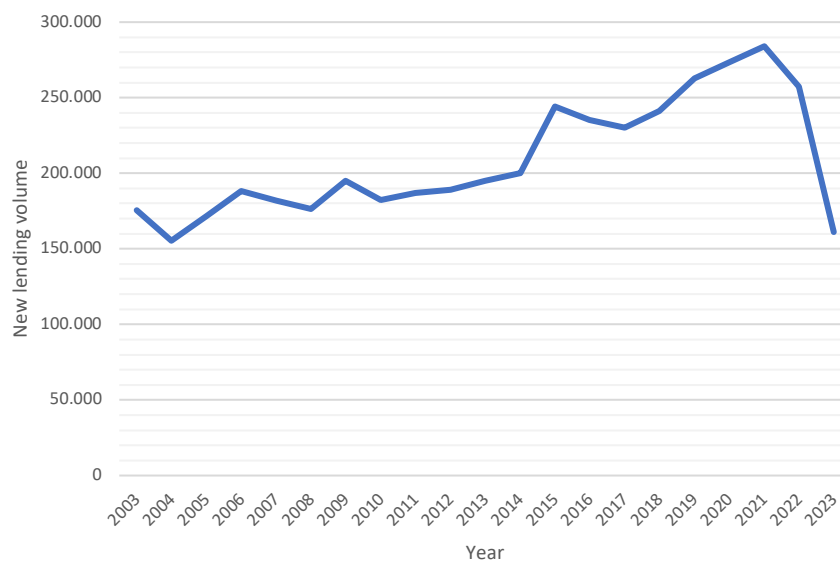


Figure 31 Yearly new lending volume for residential mortgage finance (mln, EUR) (own elaboration based on: Bundesbank, 2024b)

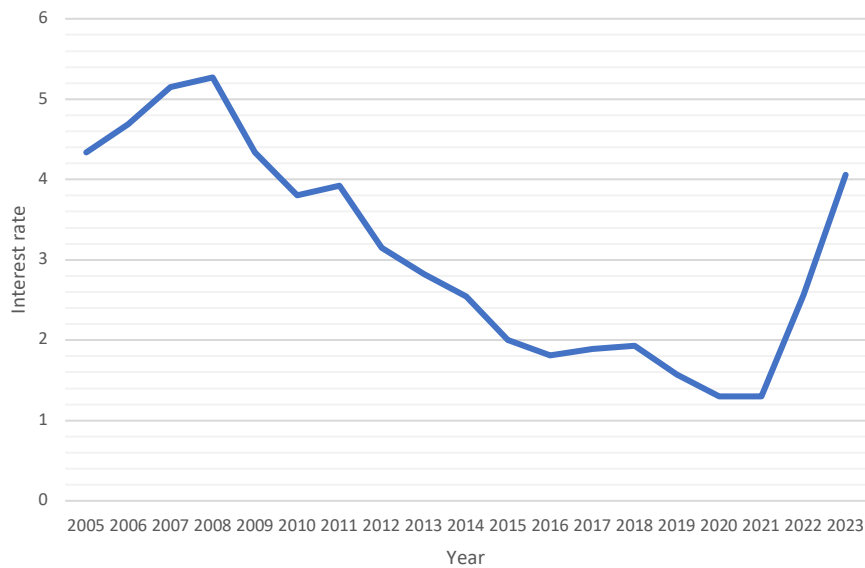


Figure 32 Average yearly interest rate for residential mortgage finance by German banks (Bundesbank, 2024c)



Figure 33 Proportion of KfW funding volume for home ownership on the total residential mortgage lending (Bundesbank, 2024b; KfW Annual Reports, 2004-2024)

In the same period, the credit lines between the KfW and the state-level promotional banks become more structured, through the institution of three programs: one through which state-level banks can promote programs that overlap with KfW goals, one for promotional themes that are not covered by the KfW, and one as a general refinancing facility.

4.4) As discreetly as possible: the bid of budget-sparing industrial policy

What overall strikes as interesting is that, despite clear policy changes taking place, the planning of the public budget reflected a remarkable continuity. Looking the planning of the disbursement of public resources from 2012 to 2016 (Bundestag, 2012), it emerges how the amount devoted to energy and other promotional fields was expected to remain either stable or even reduced over the years.

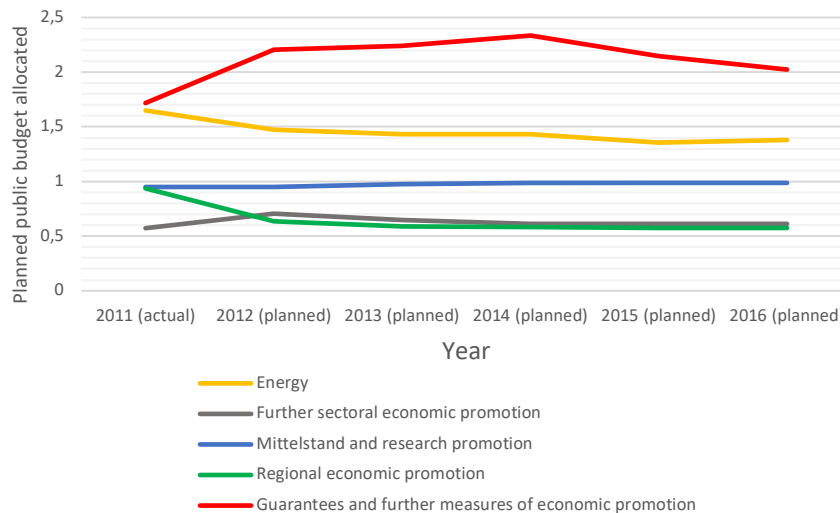


Figure 34 Planned budget expenditure for economic promotion (bn, EUR) (Bundestag, 2012)

This is partially due the fact that most of the implemented promotional measures were supposed to be implemented off-balance sheet either by the newly established funds or by deployment of KfW programmes. It is worth noticing that the largest entry is precisely related to “Guarantees and further measures of economic promotion”, namely, the most “balance-sheet sparing” of the 5 planned entries.

At the same time, and perhaps paradoxically, the more extensive use of these off-balance sheet funding instruments for the energy transition and innovation did not come with laxer regulation when it comes to the banking features of the promotional business. Conversely, what is observed is a consistent process of what the KfW labels as “modernization”, whereby the bank would be more strictly supervised and would more strictly adhere to more stringent banking standards.

In 2013, the KfW Law was reformed and the bank adopted stricter rules regarding corporate governance and financial supervision. In particular, the bank would be, from 2016 onwards, supervised jointly by the BaFin and the Bundesbank and would adhere to some rules of the *Kreditwesengesetz* (KWG). From the interview material, it appears that the introduction of the BaFin supervision was a particularly important step aimed at reducing political interference in the bank’s business (Interview 35).

“The Vorstand knows that when they accept a program or a particular loan that may be particularly risky, the BaFin will make them accountable for that decision (...) This makes so that politicians cannot impose upon the bank crazy projects”

(Interview 35)

However, reading across the lines, the matter of concern of these regulatory attempts is not so much the politicization of the bank, but its financial stability. The fear is not so much that the bank may engage in political lending, but rather that it may engage in risky lending that would jeopardize the soundness of its balance sheet. That this kind of riskiness should be associated with political pressure is an aspect that should be investigated, rather than an assumption. This is an important specification since interview data seem to confirm that political elements are at play in loan applications (Interviews 35, 18, 25).

The “modernization” process is thus primarily aimed at creating a public bank that is structurally risk averse and thus strongly biased towards the safer business segments, which appears as a paradox considering that by mandate the bank is expected to invest in those activities where there is a market gap to be filled, which thus tend to be riskier.

In this respect, it is remarkable how the “corporatization” process of IPEX, which had to undergo regular banking scrutiny earlier than the KfW conglomerate, came with the limits of the regular banking supervision, but also with some opportunities, namely to engage in business segments that a promotional bank would not be regularly allowed to engage due to competition law. However, the limits connected with this transformation seem to have been more strictly applied than the rooms of opportunity. To illustrate the point, it is useful to have a look at the Core Capital Ratio of IPEX as compared to other commercial banks active at the national level. In Figure 35, it can be observed that the Core Capital Ratio is consistently much higher than all of the other German commercial banks, even when considered as the more restrictive *Harte Kernkapitalquote* (Common Equity Tier 1 Capital¹⁸).

¹⁸ The Common Equity Tier 1 capital ratio (CET1 Ratio) calculates the ratio between a bank's core equity capital (CET1) and the risk-weighted total assets. The Ratio is obtained by dividing CET1 capital by Risk-Weighted Assets (RWAs), meaning that, through the use of weights, the riskiness of the total assets is considered in the calculation. This makes it substantially different from the equity ratio, which uses total assets as a denominator. For the purpose of analyzing the risk-aversion of the KfW management, the use of RWAs instead of total assets as a denominator is particularly relevant. It implies that the CET1 Ratio also considers how the core capital relates to the riskiness of the assets (and thereby of the lending behavior of the bank), while in the Equity ratio, this is not the case. For this reason, I consider the CET1 ratio to be a better measure of the risk-aversion or risk-propension of the bank business model.

According to the Basel III Framework, CET1 capital is made up of the sum of: “1) Common shares; 2) Stock surplus; 3) Retained earnings; 4) Accumulated other comprehensive income and other disclosed reserves; 5) Common shares issued by consolidated subsidiaries of the bank” (Basel Committee on Banking Supervision, 2020: p. 1). Analogously, EU regulation 575/2013 on prudential requirements for credit institutions and investment firms, states that Common Equity Tier 1 items include: “a) capital instruments; share premium accounts related to the instruments referred to in point (a); c) retained earnings; d) accumulated other comprehensive income; e) other reserves; f) funds for general banking risk”.

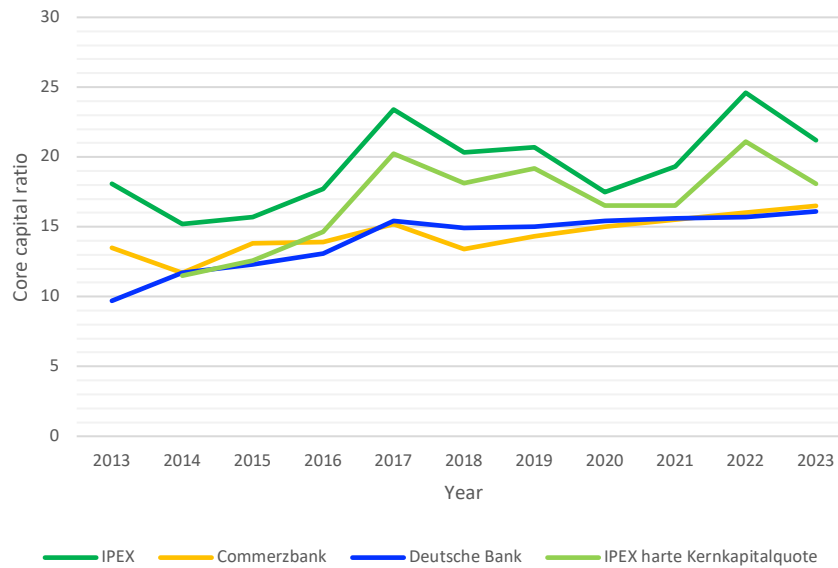


Figure 35 Core capital ratio of IPEX and the main commercial banks (%) (KfW-IPEX Annual Reports, 2014-2024; Commerzbank Annual Reports, 2014-2024; Deutsche Bank Annual Reports, 2014-2024)

It can be correctly argued that this has partially to do with the different nature of IPEX borrowers which are, in many cases, sovereigns (thus *zero weight* for regulatory purposes). This observation does not however invalidate the point regarding the scarce propensity of risk taking by a bank that is expected to be part of a system of promotional finance.

Furthermore, IPEX has increasingly oriented over time towards the use of “capital-sparing” (*kapitalschonend*) instruments, in particular guarantees (KfW, 2018a). This can be seen in Figure 36 which shows that, in relation to total assets, the entry “contingent liabilities (*Eventualverbindlichkeiten*)” has tended to increase dramatically from 2017 onwards.

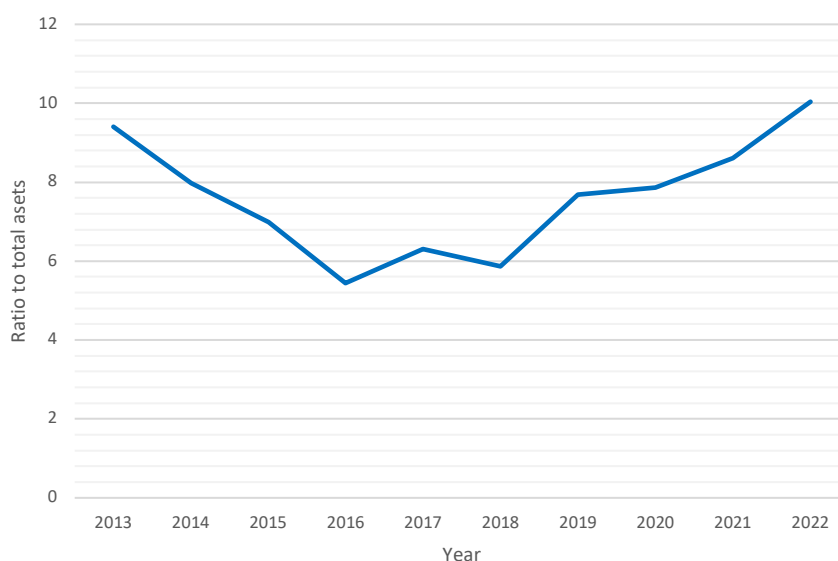


Figure 36 Contingent liabilities ratio as a % of total assets (own elaboration based on: KfW-IPEX Annual Reports, 2014-2023)

In this respect, the bank acts thus as a mediator making possible for the government to obtain an industrial policy goal, sparing the budget and making everything in a commercially viable way. An apparently fragile trio of intentions, as it will turn out at a later point.

4.5) Entering troubled waters: the realization of the changing competitive field

The early post-crisis period was the turning point when a certain awareness started rising about the need for some form of industrial policy. Nevertheless, such calls remained strictly limited to very soft forms of industrial policy within the paradigm of the *Ordnungspolitik*, with the partial exception of the more proactive stance of the shipbuilding sector. On the side of the industry, the major concerns expressed over this period of time pertained the costs of energy and electricity, especially in the context of the climate targets of the federal government.

In the second half of the 2010s, the image of the looming competitiveness crisis of the German growth model started becoming more vivid, and it became increasingly clear that the point was coming where the model could not proceed “automatically” anymore.

Industry explanations often refer to policy changes as a major driver for the new competitive disadvantage. This part of the story is certainly relevant, but, as will be discussed more in detail in the next chapter, not exhaustive. However, the policy goals that the German government set for the green transition had all the potential to trigger disruptive effects on the competitiveness of an export industry which already operated in a context of relative expensive energy pricing. In this respect, from a political

economy point of view, the real struggle would be to explain the decision of Germany to set ambitious climate transition goals despite a very solid industrial alliance expressed against the targets.

Despite being a central part of the story, the green transition was nevertheless by no means the only reason to worry for the German growth model. Figure 37 shows the trade balance for four sectors of German industry which together account for roughly 74% of manufacturing exports. A few observations are in order. To begin with, the two sectors that are most concentrated in intermediate goods, chemicals and metallurgy experienced a constant decline of the trade balance. Second, the decline also started involving the upper end of the value chain, and especially automotive, whose trade balance vis-à-vis the rest of the World worsened dramatically. Even only analyzing the relative importance of automotive in the context of total German exports, it is possible to observe that, while the sector accounted for 19.5% of total manufacturing exports in 2011, this percentage had declined to 17% by 2019 (OECD, 2024a). Third, the trade balance for manufacturing stood for most period at a lower level than machinery and automotive. This means that these sectors used also to be important upwards drivers of the balance of payments performance. This partially changed over the second post-crisis period. Automotive trade balance started performing worse than the manufacturing trade balance, while the gap with machinery also narrowed.

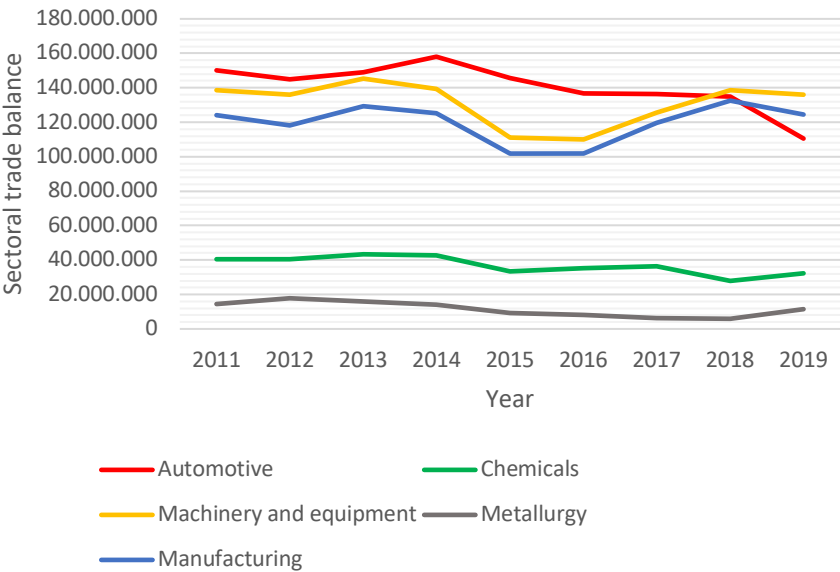


Figure 37 Net exports of selected sectors (thousand, USD) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

Although the overall balance of payments for manufacturing remained, by the end of 2019, roughly at the same level of 2011, this points to changing dynamics within the core sectors, whereby the traditional drivers of exports gradually eroded in terms of their net position vis-à-vis the world.

A closer look at the main German reference markets allows to have a more fine-grained picture regarding the different origins of the competitive challenges posed to the core sectors (Figure 38 and 39). It can

be observed that the only manufacturing sector to display a consistently highly positive trade balance position with China was the automotive sector for the whole period under analysis, while machinery underwent a decisive worsening, and chemicals and metallurgy moved erratically close to the line of balance. Considering the US, the situation appears to be very different. While all the sectors display a positive balance, this is true especially for machinery. Automotive saw a steep initial rise, but a subsequent decline.

Eventually, the trade balance of Germany vis-à-vis other EU member states (including the UK) also shows some interesting dynamics. While the trade balance increased positively over the whole period for manufacturing, the sub sectors of automotive, metallurgy and chemicals experienced a slow decline. The dynamic of exports was also overall stagnant or declining for all sectors except of machinery, leading to the observations that the worsening of the trade balance is not only due to rising imports, but also to a weak export dynamic.

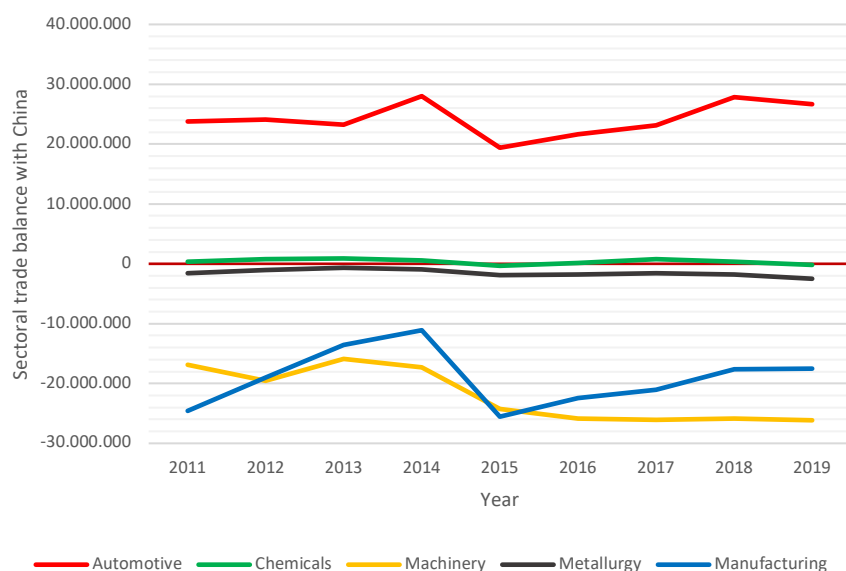


Figure 38 German net exports to China for selected sectors (thousand, USD) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

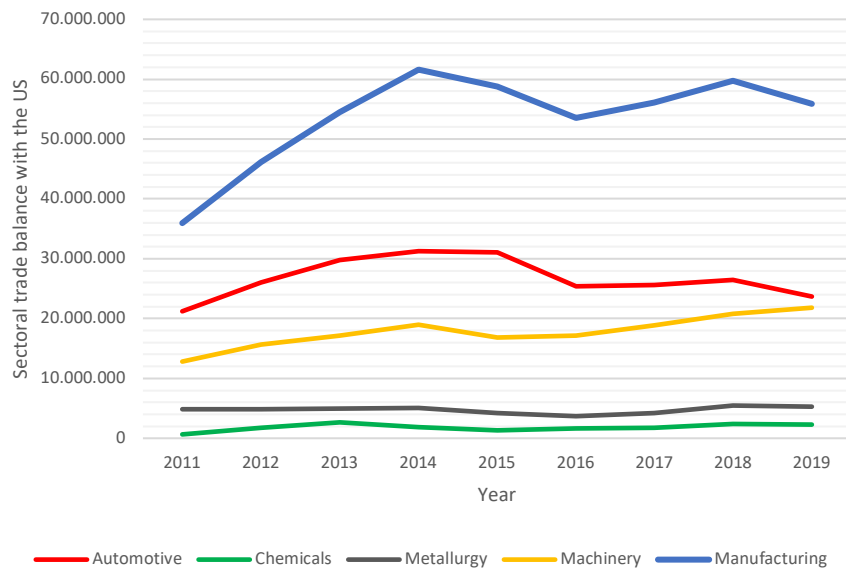


Figure 39 German net exports to the USA for selected sectors (thousand, USD) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

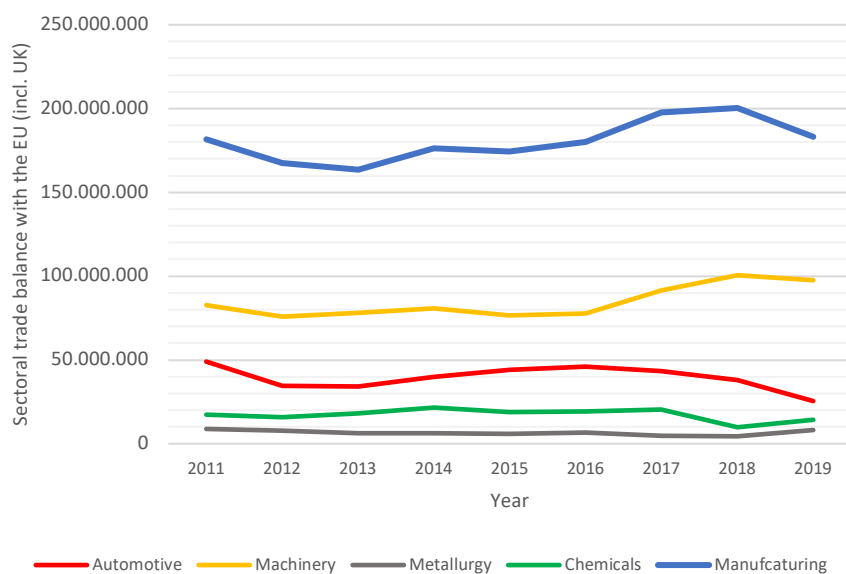


Figure 40 German net exports to the EU-27 (incl. UK) (thousand, USD) (OECD Bi-Lateral Trade Database, 2024)(OECD, 2024a)

The data thus generally point to a weakening dynamic for German manufacturing especially in the second half of the decade. The endangered condition of the trade balance only gradually raised to attention of policymakers and the industry alike. The second half of the decade determined nevertheless, especially towards its end, a change in the general attitude and the begin of calls for action also by business organizations.

In this respect, it is important to remark that a line should be drawn between the competitiveness threat to the “*Standort*” and its productive structure, and the competitiveness threat to manufacturing conglomerates. The two aspects do not need to be necessarily related and, for some time and sectors, they were factually not. What is observed by looking at trade balance data is, in fact, overwhelmingly indicative of the extent to which products manufactured in Germany are exported abroad. Nevertheless, the dynamic of profits obtained by products manufactured and sold abroad is not grasped by this statistic.

4.6) Shaking titans: a new phase for German automotive and steelmaking

The automotive industry is a particularly relevant example. As an interviewee from the automotive industry pointed out, the fact that companies export less, does not mean that they are less successful on the international markets. In most cases, the tendency is to produce close to the final market, especially for goods that present challenges in transportation, like industrial gas, or whose transportation cost is too high related to the marginal profits, like some Tier-1 intermediate parts for automotive (Interviews 66, 71). According to an interviewee, this process has gone so far that the traditional way of thinking of exports has become obsolete. As explained in the previous chapter, the financial crisis accelerated the propension of German automotive companies to invest in China, in light of the sluggish dynamic on the European market. Changes in the competitive environment of the second half of the decade would exacerbate this tendency further.

For the automotive industry, 2016 was certainly an important year, since the new course inaugurated by the trade policy of the Trump administration made clear that the US market was not as a reliable source of revenues as in the past. The VDA thus started pointing out the declining relevance of the US market also in future perspective (VDA, 2018b). It has to be observed that this tendency is envisioned despite the tendency was already for German manufacturers to produce directly in the US the cars that would be sold on the US market (VDA, 2018b).

At this stage, however, German car producers managed to successfully keep their competitive position in foreign markets. For instance, 2019 was a profitable year for the German automotive industry, which managed to increase its share in the Chinese market to 24.9%, the historical peak, and to achieve good results on the US market as well, despite world-wide recession tendencies (VDA, 2018b). Meanwhile, the investment in research and development was raised to 44.6 billion Euros in 2018 (VDA, 2020c).

Although export quantities decreased by 13%, leading to lower production volumes domestically, revenues increased remarkably. The alleged reasons for this are, together with the 5% shrink in the world market for passenger vehicles, the escalating trade tensions with the USA, which further accelerated the tendency to produce on the final market. An analogous tendency was to be seen on the Chinese market, where the largest number of cars produced for the market were produced domestically (VDA, 2020c).

The VDA did not indeed shy away from arguing that China increased in importance for German car producers, not only as a market, but as a production site also in perspective of exporting cars assembled in China for foreign markets (VDA, 2020c).

Symptomatic of this trend is also the fact that automotive domestic suppliers did not experience the growth in revenues that final producers enjoyed in 2019, right for the fact that the domestic volume decreased in that same year (VDA, 2020c).

The loss of competitiveness here is thus not so much attributed to German automakers' products per-se, but rather to Germany as a location for production. Part of this competitiveness loss is attributed to the price of energy, especially of the tax component. The VDA would state:

“Der hohe Strompreis ist ein klarer Wettbewerbsnachteil für die deutsche Industrie. Er kann sich negativ auf Standort- und Investitionsentscheidungen auswirken“ (VDA, 2018b: p. 58)

An adaptation strategy from automotive producers was to produce a large share of their electricity in their own production plants, for which they paid an EEG-levy that nevertheless was not to be paid in full, but limited to 40%. Nevertheless, the Commission considered this limit to be against state aid regulation and thus the producers would have to pay the full amount of the EEG-levy subsequently, which would have made the factory-based power plants economically less viable.

Therefore, although automotive conglomerates did not seem to have a profitability problem, the German system appeared to be a decreasingly good investment both for proximity and for location cost reasons.

Since 2019 nevertheless, the overall changing framework would become so that companies from the core industrial sectors, automotive in particular, would start facing challenges from multiple fronts, exacerbating these already existing problems.

For the automotive sector, electrification became by far the most demanding challenge. The German automotive industry had invested massively, in the preceding years, in the electric car technology, and could showcase the fact that one out of four electric vehicles' patents were originated by German producers (VDA, 2018b, 2020c). In particular, the net additions to the number of patents registered in Germany for electric vehicles-related technology raised steeply in the years between 2017 and 2019 (IRENA-INSPIRE, 2024). However, it should also be remarked that, although the strategic shift of automakers towards electric vehicles has been more decisively and rapidly implemented over the last years, a rising trend in the registered patents for this technology was already to be seen since the beginning of the 2010s. Factually, the number of patents filed for electromobility started already surpassing the number of patents for fuel cells (hydrogen-related) towards the end of the 2000s. This specification is important, in that it challenges the narrative of a German automotive industry arriving overtly technologically unprepared to the electrification challenge.

Therefore, the confidence of the VDA President Mattes in 2019 seemed to be at least to a certain extent grounded, when he stated that “[d]ie deutsche Automobilindustrie agiert aus einer starken Position heraus und legt sich bei der Elektromobilität richtig ins Zeug” (Mattes, 2019)

The more decisive strategic shift to electrification is nevertheless a recent trend, perhaps not so much as a general orientation, but decisively more so in terms of the speed of the process (Interview 31). The origins for such shift are multiple and interview data is not unanimous in such assessment.

Few doubts were raised that the sector would not have shifted focus to electric vehicles was it not externally imposed, although the assessment of the influential factors widely varies. A first and obvious reason given is the introduction of new much more stringent targets in the EU with the Green Deal of 2019, which is the most commonly mentioned factor (Interviews 31, 70). In relation to this, some interviewees also pointed to the so-called *Diesel Gate* as a determining factor in accelerating a detachment between the Commission and the automakers’ credibility, thus leading to a “punishing” attitude by the Commission (Interview 70). A second factor mentioned is the need for electric producers to remain competitive on the Chinese market, which had grown in importance and which had very stringent regulation with respect to emissions (Interviews, 31, 04). For example, the NEV credit system¹⁹, introduced in China in 2017, factually forces to producers to comply with an electric vehicles quota, with penalties for noncompliance. Furthermore, the nature of the incentives awarded by the NEV also exerts pressures on carmakers to increase the speed of innovation. Third, carmakers would have followed the policy of subsidization and incentivization implemented both in China and in the United States, which in both cases went towards a direction of advantaging electric vehicles (Interviews 31, 04).

The only flaw in the “regulatory explanations” regarding the European Green Deal, is that the investment in electric vehicle technology, as mentioned, had been increased already before some of these regulations were actually implemented. Nevertheless, it is also reasonable to assume that such regulations did not come out of the void, and that carmakers already sensed the direction of the upcoming change.

The “market of reference” explanations are even more reasonable when considering that the automotive industry has seen a steady increase in revenues coming from markets outside of the Eurozone. While such markets represented only 34% in 2005, this share increased to 51% in 2022 (Figure 41).

Considering the exports in trade in passenger cars for end use (a business area proper of the large German OEMs), the changing balance is even clearer (Figure 42). While before the financial crisis, the European market made up almost 50% of the total exports, this share fell down to 29% in 2013 and only in 2021

¹⁹ The NEV credit system is a system of incentivization adopted in China to promote the reduction in emission in the automotive industry. It is a system of credit allocation rewarding the energy performance of vehicles powered by clean energy. Each automaker has to comply with some credit quotas and, when failing, they have to purchase credits from other manufacturers who have a surplus.

would reach the highest post-crisis level of 38.2%. Conversely, the Chinese share of total exports passed from 1.2% in 2005 to 14.1% in 2021, when China became the largest single national market for German carmakers (OECD, 2024a).

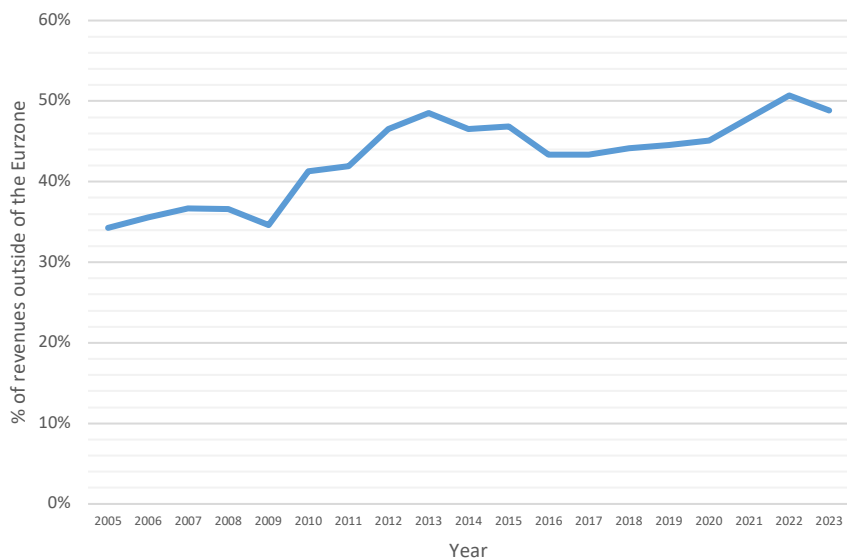


Figure 41 Automotive industry percentage of revenues outside of the Eurozone (own elaboration based on: Destatis, 2024a, 2024c)

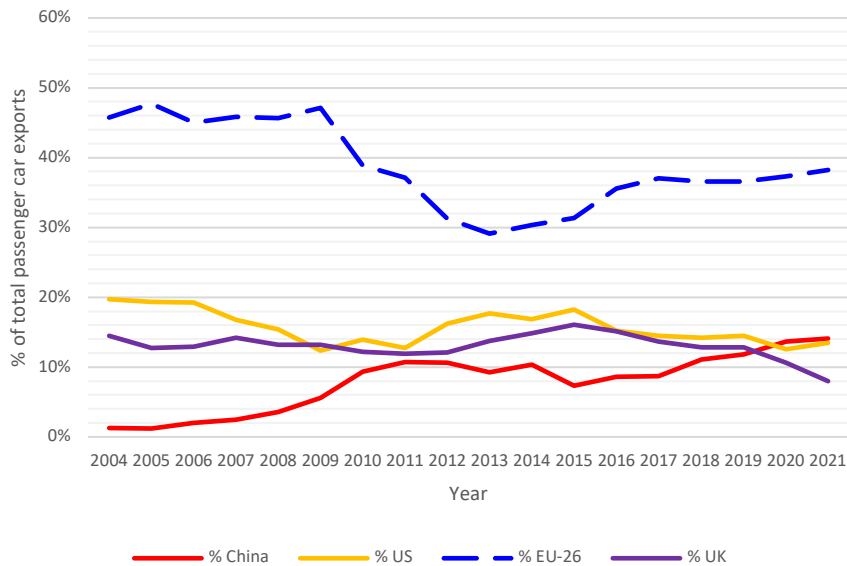


Figure 42 Percentage of export of passenger cars for end use to different areas (% total exports) (OECD Bilateral trade tables, 2024) (OECD, 2024a)

Again, it should be stressed, that this data only refers to those cars that are exported outside of Germany, and does not grasp the overall profits made by German carmakers in foreign markets.

If to this data we add the contextual fact that the Chinese market is far from saturated, and has been growing decisively in importance over time, it made sense for automotive producers to adapt to the system of incentives and regulation that was being set up in that country. Interview data also points to the fact that the Chinese market is currently indispensable for any European car producer, in light of its sheer size and its expanding trend (Interviews 31, 04, 70, 71).

Nevertheless, changing regulations in China and Europe created a frame of urgency that made the outlook more uncertain for German automakers, at least for the speed at which change was required.

The EU Green Deal was particularly opposed by the industry, in light of its particularly stringent targets and what is often defined a “de-facto ban of combustion engine vehicles” (Interviews 70, 71). The main matter of contention is that the EU green deal specifically implied a de-facto prohibition to matriculate new combustion-engine vehicles starting in 2030, a target that was considered unreasonable and overwhelming for the European car industry, which established its competitive advantage and the bulk of its sales in combustion engine cars. Furthermore, the electric car products were at a stage of development and marketing that made so that sales have often occurred at a loss (Interview 70). This means that, with the speed in achieving targets as imposed by the Green Deal, the industrial strategy to cross subsidize electric vehicles production and investment with combustion engine sales would be out of the game.

“China promoted its electric vehicle industry, but it didn’t torpedo its combustion engine industry”
(Interview 70)

On the Chinese market, the government promotion of electrification turned also into a competitiveness problem. In fact, being the market position of German manufacturers particularly established on the combustion engine market, the clear technological orientation towards electric technology threatened also their position in their largest market of reference. This would trigger, in the years after 2019, a loss in the market share of German producers in China, in favor of domestic competitors with strong electric vehicles alternatives and enjoying substantial subsidization by the government. The electrification thus turned into an existential matter not only for the *“Standort Deutschland”*, but also for the general competitiveness of German automakers.

As a matter of fact, it was noticed by an interviewee that the competitiveness problem does not so much affect the automotive premium brands, but more cars for the mass market in the lower segments (Interview 31). While the former productions are indeed less price sensitive, the latter risk being stuck into a cut-throat competition with cheaper foreign producers delivering similar quality. The industry thus requested actively the promotion of electric vehicles also by means of subsidization of research and of the extension of the *Umweltbonus*, which was reintroduced already in 2017. The program, which was supposed to last from 2016 until 2019, entailed a funding volume of 1.2 billion Euros for the whole timespan, a rather limited amount when compared to the previous 5 billion euros-worth *Abwreckprämie*.

Moreover, a plan for charging infrastructure was promoted, with 200 million euros dedicated to fast charging stations, and 100 million euros for normal charging stations.

The situation in the car industry is particularly interesting because of the structural importance of the segment as a driver of aggregate demand (Baccaro & Hadziabdic, forthcoming). However, the industries overwhelmingly placed as suppliers of intermediate goods started feeling the bite of the competitiveness crisis much earlier.

In particular, the steelmaking industry was caught among unfavorable pressures from even more fronts than was the case for automotive. To begin with, steel is a product in which it is difficult to cut market niches, which thus made price competition even stronger. Furthermore, steel tends to be one of the first subjects for tariff protection abroad, especially by large exporting countries. Eventually, steelmaking is particularly hard to decarbonize, in light of its high energy intensity and the difficulty to replace coal-furnace-based production processes.

The German steelmaking industry pointed out that governmental emission targets will require very large investments in research and development, as well as in infrastructure. They thus required that the government supports the sector, especially with promotional programs for research and development (WVS, 2018).

Moreover, steelmakers requested stronger support from the European level, as well as from the government not only for the green transition, but also for the trade war with the United States (WVS, 2019a; 2019b). In this respect a pivotal supporter of the industry were the state-level governments, that pushed for the national government to avoid burdening the industry further (WVS, 2019b). Considering that a high proportion of German steelmaking used coal furnaces, instead of electric furnaces, the challenge for German steelmaking was one of emissions and electricity pricing, that went together with a global overcapacity crisis due to more aggressive trade policies by extra-EU partners, as well as overcapacity in China.

Overall, when looking at the development of German industry in the second half of the 2010s, it can be seen that the calls for government action started intensifying, especially by industries who were in a more fragile position of the global value chain. The nature of such calls also started changing, shifting from being merely “*Standort*-related” to being increasingly a request for subsidization. What exposed so far concerns the traditional sectors. However, the new competitive framework is featured by the emergence of new capital-intensive sectors whose spillover over the traditional sectors is decisive. Although such “new sectors” are not the main focus of this work, an understanding of their broader policy developments is complementary to the main story.

4.7) The new sectors and the policy of technological transformation

Technological upgrading was one of the ways through which the German system seemed to be successfully escaping the crisis of Fordism, favoring incremental innovation and the focus on quality as a compensation for higher prices.

However, new technological developments have further complexified the “striving for quality” effort and they have bounded it to new emerging sectors that have acquired a systemic importance of their own. Such sectors, such as software development, platform development for manufacturing, robotics, and the like, generate their own “national champions” which nevertheless create products that are decisive for the competitiveness outcomes of traditional sectors. For example:

“Currently (...) If I produce a car for which I need for example an American software, it is clear that I end up not having real control over what I am producing” (Interview 18)

There was thus a gradual process of realization that, in order to maintain the competitive edge, having strong domestic traditional sectors was not sufficient anymore, and that promoting the new sectors was now an extremely challenging task, albeit a necessary one.

As previously mentioned, the German state used state finance to promote venture capital in innovative sectors already early in the story. The interest for the new sectors was thus far from new, but it was never able to trigger state activism as in the period from 2016 onwards.

Particularly in the German context, there was a specific critical moment when the discussion even reached the sphere of “noisy politics” and when a series of actors would start mobilizing. This became known as the “KUKA case”.

KUKA is an established German player in the field of industrial robotics, which was considered to be the jewel in the crown of the German technological and innovation system in the “industries of the future”.

In the relatively short period between 2010 and 2014, KUKA experienced an astonishing growth rate, increasing its revenues to more than 2 billion euros (+ 94%) and the number of employees to more than 12.000 (+102%) (KUKA AG, 2015). By 2016, the number of employees had raised by 120%, while the revenues almost reached the 3 billion euros threshold (+173%) (KUKA AG, 2016).

When, in 2016, the Chinese company Midea Group acquired KUKA, the case became highly salient and the perception was that Germany was unprepared to face strategic actors internationally that had a very clear strategic plan of acquisition for establishing a competitive position in the industries of the future. More specifically, the expressed concern was that other countries, and especially China, were actively promoting their national players and specifically their cross-border acquisition activities.

The case triggered a disordered mobilization of actors, among whom some large industrial conglomerates, that called for the government to intervene in the case, for instance by blocking the acquisition (Interview 18). As response, the government argued that there was no legal grounding for intervention in the case, and invited the industry to take autonomous action to keep the company in the national system (Interview 18).

Suddenly all the interested actors woke up to the cold shower and realized there was no Deutschland AG anymore. Nobody took responsibility or action for obtaining the desired outcome. As a result, the company was successfully bought by Midea.

“The KUKA case was in some way a wake-up call”

(Interview 23)

It is reported by interview material how the KUKA case decisively accelerated awareness on the need of an industrial strategy. Differently from sectors such as automotive, the reason behind such salience does not only have to do with its sheer size or with employment considerations, but also with all the spillover effects over the German system of production (Interviews 18, 23, 22). In fact, processes of robotization and automation are widely employed by the main German industrial players and having a domestic producer was by some considered to be a guarantee for the creation of a stronger interconnected system. It is possible that the corporate interests that called for action in the KUKA case considered the acquisition of KUKA to create potential future uncertainties. In fact, KUKA serves many customers from the German automotive and electronics industry, including Volkswagen, BMW, Siemens, and Porsche (KUKA, 2013; 2015b; 2016). In 2015, Porsche even acquired the “tool construction division” of KUKA (Porsche, 2015).

These kinds of considerations help us make sense regarding the redirection of the use of state finance towards goals of technological upgrading. Promoting national players in the new strategic sectors is, in this respect, vital for the spillovers over the traditional manufacturing sectors, as much as access to steel was vital for the same reasons in the 20th century.

There are in 2016 factually some further steps that go into the direction of structuring the role of state finance in the field of technological upgrading, especially in the field of venture capital. For what concerns the KfW, this has meant the undertaking of the step of creating a subsidiary that would invest in the venture capital market.

The decision to create a venture capital subsidiary would turn out to be rather controversial. According to interview sources, the bank management strongly opposed the idea at the beginning, in light of the risks entailed in the enterprise (Interview 35). On the other side, the highest political level was mainly concerned with establishing the venture capital branch, with little interest for the details on the precise mode with which that would be done (Interview 18).

The final result was that the bank management accepted the institution of the new subsidiary, but provided that it would not be a fund directly investing in companies, but rather a fund investing in targeted specialized funds. It was thus decided that, in 2018, the subsidiary “KfW Capital” would have been established.

The numbers seem to confirm this renewed policy orientation. As can be seen from Figure 43, the KfW lending volume for programs related to venture capital, research and development, and innovation raised steadily since 2010. Nevertheless, since 2016 the trend started being more erratic and featured by a wide variation between 3.9 and 8.3 billion per year. This kind of variation may be due to several factors, especially related to the demand for these forms of financing.

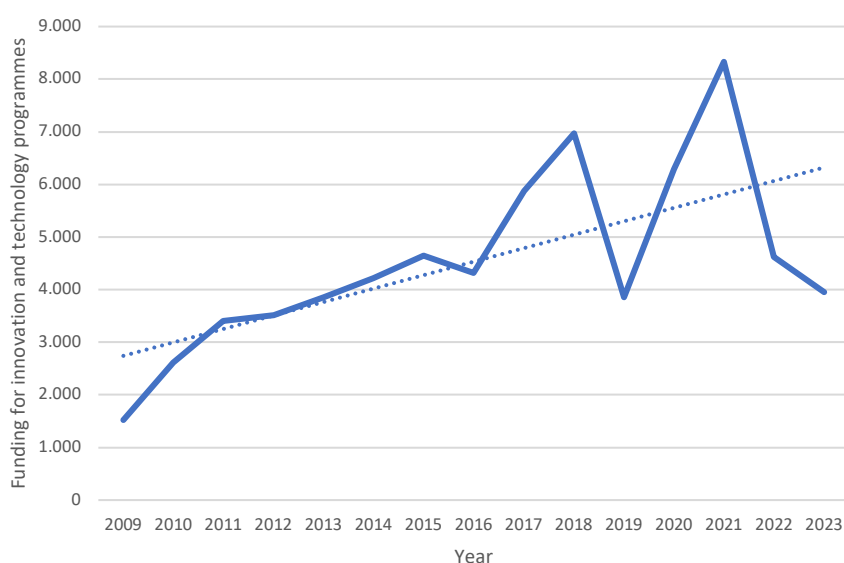


Figure 43 KfW programmes for Innovation and technology (mln, EUR) (KfW Annual Reports, 2010-2024)

It is nevertheless without a doubt that the strengthening of venture capital was seen as a way to complement the technological upgrading agenda, since technological start ups can have important spillovers over the core sectors. As the *Nationale Industriestrategie 2030* explained:

“Erfolgreiche deutsche und europäische Start-ups in diesem Bereich finanzieren sich ab einer bestimmten Wachstumsphase zunehmend über Venture Capital Fonds in den USA. Dadurch werden sie Schritt für Schritt US-amerikanische Unternehmen” (BMWi, 2019a).

Furthermore, the new *Sondervermögen* for digital infrastructure (*“Digitale Infrastruktur“*) was established, in order to finance the upgrading of the digital infrastructure that was long asked by the industry.

4.8) The end of certainties: apogee and crisis of the German self-driving growth strategy

The present chapter has given an overview of the beginning of the gradual process of erosion of the productive engine of the German growth model.

The developments that are here displayed are to be seen as the manifestation of a phase whose seeds were already sown in the previous period.

In particular, the 2009 crisis led, especially in automotive, to a drop in the proportional importance of exports to the European Union, in favour of other markets, especially the Chinese market. This would provide the base of a mechanism through which German carmakers could, at least partially, “subsidize social peace” at home by relying on larger volumes abroad. Such strategy nevertheless presupposes a series of conditions: growing foreign markets, a continuous competitive edge of the industry over rivals, persistent capacity to charge higher prices and a fairly passive industrial policy by competing countries.

The second half of the decade would prove the reliance on such assumptions to be a mistake of poor foresight. On the one hand, China would start a more active policy of industrial upgrading, favouring domestic players and strongly targeting the market segments, like electric vehicles, where Chinese automotive had better margins to grow. On the other hand, the US would engage in a protectionist, and later activist, turn that was there to stay way after the first Trump administration.

This made the traditional German style of “small state industrial policy” increasingly obsolete or, to better rephrase it, Germany rediscovered itself as a relatively large state. The adverb “relatively” may appear as a rhetorical device, but it is instead a fundamental part of the story. In the context of competition with growing domestic markets of countries with populations of several hundreds of millions, Germany will increasingly realize to be stuck in a “middle-size trap”. It will become clear in the next chapter how this “problem of size” will drive the industrial policy orientations of the country.

How much of a “strategy” was there in the post-2010s period?

Rather than a growth strategy, which would imply a systematic coordination of actors with some sort of central “control room”, what is observed in the German case is an overlapping of strategies that are to a certain extent reactive to each other.

The dominant role is still played by the strategic centres of the large national champions, especially in automotive. These have large “micro-strategies” related to markets of investment and markets of reference aimed at promoting their own growth and diversification.

On its side, the government largely delegated the strategic element to business, in the illusion that their interests would continue to overlap with the interests of Germany as a productive “*Standort*”. The logic

so far was that what is good for the national champions is good for Germany, and national champions know better what is good for them.

This nonetheless, there have been some strategic elements at play, mostly geared towards compensating, through tackling the issue of electricity prices, the disadvantage of a stagnating market and relatively high labour costs. In practice, this was an attempt to scratch the bottom of the barrel for some higher margins.

It is in this guise that the focus on expanding the capacity and abating the cost of production of electricity and gas should be read. While no large-scale attempts at reducing energy taxation were undertaken, presumably to avoid endangering a budget discipline that was still not in discussion, there were attempts to get around the problem, especially favouring solutions that were more commonly adopted by larger companies (e.g. own electricity generation). In this respect, advantaging larger electricity consumers, the German energy policy was mostly concerned with lowering costs for large manufacturers, leaving to the Mittelstand a comparatively larger tax burden.

The observation that the initiative was overwhelmingly left to private companies should not deceive into thinking that the government was just a spectator. There was in fact growing communication and consultation between government and business interests in this period also with respect to topics such as acquisitions (Interview 18).

However, the overwhelming approach in industrial policy was horizontal and budget-sparing. State finance played a fundamental role, in that it allowed to promote certain goals and projects leaving the budget untouched. On the one hand, the KfW, and especially the IPEX section, was employed to finance programmes and projects of interest, for instance in the field of renewables. On the other hand, the newly established Sondervermögen also provided the government with additional off-balance sheet financial firepower. It has nevertheless to be observed that even the use of these instruments was framed in an overall cautious framework. In particular, the KfW was limited in its capacity to take on risk and the management of the bank was overall more on the conservative side.

During the very last years of the post-crisis period, the tendency would arise to intensify the use of state finance in order to actively promote two types of sectors.

On the one hand, the traditional sectors started calling for assistance to cope with a situation of overcapacity, especially in the sectors producing intermediate inputs, such as steelmaking and chemicals, but at a later point also in sectors producing final goods. For such sectors, a new phase of capitalism featured by the so called “problem of overcapacity” faced them with little pricing power and thus a loss in their marginal profitability.

On the other hand, the state has increasingly been called to promote new sectors acting as enablers or enhancers for the traditional sectors. The establishment of KfW Capital and the Sondervermögen for the

broad band network should also be considered from this strategic perspective. These were the only hints to a change that, as will we see in the next chapter, will accelerate year by year.

CHAPTER V

Outpaced by reality

German industrial policy between innovation, resistance and standstill

The previous chapter has displayed the process through which the post-financial crisis period's overconfidence regarding the German competitive place in the World economy has turned into rising uncertainty and warnings on the long-term viability of the *Standort*.

This final chapter shows how this process has seen a dramatic and unprecedented acceleration over the last four years, when a variety of unfavorable circumstances overlapped, thereby favoring the acceleration of an already looming competitiveness crisis. The stress on the graduality of change is important, since in the literature and the public debate the point is often made regarding the Covid crisis and the Russian war of aggression against Ukraine as game changers (Gräf & Topuria, 2023). The present research challenges this reading and points out that the seeds of the current crisis were already being sown in the previous decades. The supply chain disruptions during the pandemic and the spiking up of energy prices during the war had only the effect of making such changes more visible and to sharpen their underlying contradictions.

To summarize the main lines of the argument, the underlying changes that have invested the German growth model are a mix of structural and political factors that contributed to dismantle the ordoliberal premises on which the model of economic development was relying. The model relied on the capacity of corporations, especially large corporations, to consistently open new markets and to remain competitive on those markets. The dampening of the European market following the financial and sovereign debt crises was thus compensated by the growing Chinese market and the subsequent US recovery. However, the assumption that the political conditions in the external economy would remain stable over time turned out to be illusory, both from the point of view of inputs and from the point of view of outputs.

With respect to industrial inputs, the rising demand for resources derived from the expansion of production abroad exerted pressure on commodity prices, raising thus the costs of raw materials. Moreover, at the moment of rising demand, resource-poor countries like Germany would start disadvantaged due to the policy reaction on the side of the producing countries, especially those willing to promote the domestic industry and thus limiting the exports of raw materials. While this point has come to wider public awareness in the field of the so called "rare metals", simpler metals are not exempted. As an example, let us look at the development of the price of iron ore, a fundamental raw material for steelmaking and, consequently, for most high-end manufacturing products (Figure 44).

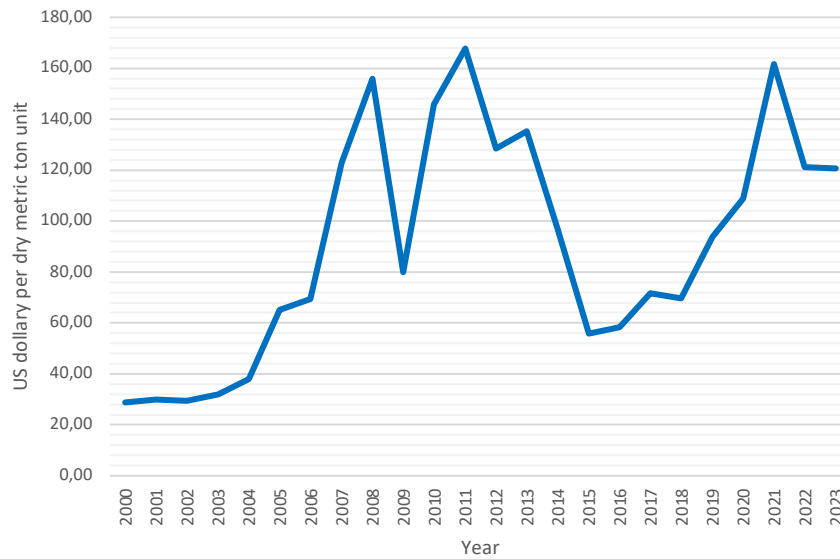


Figure 44 Price of Iron Ore (USD per dry metric ton unit) (World Bank, 2024b)

It can be observed, that the price of iron ore started spiking up already in the second half of the years 2000s, and was subject to very large multi-year fluctuations over the subsequent years. After a dramatic decline in the first half of the 2010s, the price started rising dramatically again towards the end of the decade, driven by both higher demand and by the reduction of supply for overcapacity management (Álvarez & Skudelny, 2017). The prices of naphtha, an essential oil-derived material for the chemical industry, raised to very high levels until 2015, when they dropped, only to start rising again since 2020 (Trading Economics, 2024).

On the output side, the ordoliberal strategy relied on the condition that trade partners would not, at some point, start shielding the market by advantaging home producers or imposing local production quotas and that profit-oriented innovation would remain within the national context. The previous chapter discussed how the cases of shipbuilding, steelmaking and automotive proved this to be a brave assumption even in the short run.

The idea that the state should outsource the strategic locus of control to business has contributed to the maintenance of an atrophied state machine with scarce instruments to intervene, once such intervention would be needed. The following sections will dig into the story of how the structural crisis of the core sectors of German manufacturing triggered the stimulus to change both from policymakers and state officials. This is also the moment at which the arrangement of overlapping interests between different segments of the German growth model started crumbling, especially between large conglomerates and the national stakeholders.

The awareness regarding the core sectors of German manufacturing intervenes here in an indirect way. On the one hand, the structural dependence of Germany from a relatively established set of sectors has

given a name to the problem. Differently from what we will see in the Italian case, Germany found it easy to identify the sources of its structural decline. On the other hand, the larger size of German businesses has provided policymakers with names and surnames that had a structural position within the industry overall, not relying solely on the representative power of business organizations.

The story of how this process of change has been unfolding starts before the pandemic and specifically in 2019, when German national politics showed the first signs of dynamism.

5.1) The National Industrial Strategy 2030

At the beginning of 2019, things seemed to be moving fast. Right at the beginning of the year, the European Commission vetoed on a planned fusion between Siemens and Alstom, which would have created a corporate giant able to compete with rising Chinese competitors in the railway sector. The veto by the DG Competition not only sparked outrage from the two companies, but also at the political level.

In fact, right after the Commission veto, a *“Franco-German Manifesto for a European industrial policy fit for the 21st Century”* followed, in which the railways sector was also mentioned, together with the AI, automotive and steelmaking as those most affected by changed in the contemporary change in competitive conditions (BMW_i & MEF, 2019). The statement overtly clarifies the need for a new industrial policy:

“The choice is simple when it comes to industrial policy: unite our forces or allow our industrial base and capacity to gradually disappear” (BMW_i & MEF, 2019).

While this tone appears to be familiar to the French approach of industrial policy, the fact that this rhetoric was adopted by Germany already constituted an important novelty.

The text of the joint statement was centered on three main pillars that should set the industrial priorities of Europe for the subsequent years. The first one is to dramatically increase investment in innovation. Secondly, the current regulation on mergers should be reconsidered, in order to allow the creation of European champions able to compete with much larger global champions. Third, protection mechanisms should be instituted for the industrial and technological assets of Europe, including investment screening.

Approximately in the same days of the Commission decision, the BMW_i Minister Peter Altmaier also took political initiative to launch his new *“Nationale Industriestrategie 2030”* providing guidelines for a new and more active approach to industrial policy. Although the proposal touched into a wide range of areas and problems, I will limit my observations to the most significant parts.

A first remark should be made on the strategic sectors listed, which include steelmaking, chemicals, mechanical engineering, automotive, optical industry, medical machinery, green tech, defense, aerospace and 3D printing. Notably, the sectors mentioned are all either core traditional manufacturing sectors or new sectors that have important spillover effects for the main sectors. Notably missing are the construction and the shipbuilding sectors, despite their strategic and economic significance.

Secondly, the need of the new industrial policy orientation is justified by a looming loss of competitiveness of German manufacturing in a context where competitors such as the US and China are implementing more aggressive forms of trade and industrial policy. The fact that this was considered to be the major concern is confirmed by both document and interview material (Interviews 03, 04, 18).

Third, the proposal to increase the percentage of GDP accounted for by manufacturing to 25% is particularly interesting, since it necessarily entails a policy of reshoring, inverting the historical trend towards deindustrialization. How such policy of reshoring is to be implemented remained nevertheless unexplained.

Fourth, and perhaps most crucially, one of the main competitive disadvantages of the German system is attributed to the fact that companies do not reach a critical size allowing them to compete with global players from China and the US. It is hard to overstress the importance that the topic of scaling up has acquired, especially in the second half of the 2010s in the documents consulted and in interviews (Interviews 03, 04, 13, 18). This is motivated both by the need to reach large economies of scale, and to mobilize sufficiently large capitals to undertake certain investments (Interview 04).

Eventually, an interesting part of the strategy is a re-definition of the role of the state, though in a still very cautious way and stressing the persisting importance of the “*Ordnungspolitik*” as a paradigm. This reaches its most audacious proposals when it goes as far as proposing temporary state ownership for companies of strategic importance which are threatened by foreign acquisitions. It is also remarked that companies that are economically strategic should be “rescued” by domestic private investors, rather than the state²⁰.

“The greater the macroeconomic significance of a process, the greater the scope the state must have for active and activating policy design”

(BMWi, 2019a)

“In cases of takeover attempts where, rather than national security interests, technology and innovation leadership are at stake, it is primarily the responsibility of the private German economy and its actors

²⁰ This is presumably a reference to the KUKA case, where the private industry required the state to take action, but refused to engage in the matter first-person.

to prevent such takeovers through their own bids. In these cases, the state can encourage and support." (BMWi, 2019a)

The direct involvement of the state should have happened through the establishment of a shareholding facility (*Beteiligungsfazilität*) that would have operated as a passive temporary shareholder (*Stillebeteiligungen*) for cases of strategic importance. The shareholding style was planned to be rotational, namely the participation volume should not increase over time. This latter statement, an obvious concession to the fears of "*Staatswirtschaft*", created an inherent ambiguity in the proposal, since it is far from clear how a fund should not grow before being established in the first place.

Overall, the proposal made up a rather an astounding step towards stronger state interventionism in industrial policy. As predictable, reactions to a proposal of this innovative potential were mixed.

The steelmaking industry gave an apparently good assessment and advocated for a stronger industrial-political intervention. The President of VW-Stahl Jürgen Kerkhoff argued: "*The steelmaking industry can only overcome the enormous challenges, such as the increasing global protectionism and the transformation to a low-carbon economy, if these are accompanied by an enabling industrial policy*" (WVS, 2019c). In reading this positioning, the factor of global overcapacity should not be understated since, once again, it provides a context of steelmaking as an industry in structural competitiveness crisis, similarly to what already seen for the shipbuilding sector. Moreover, it is interesting that in its general communication approach the steelmaking industry tried to discursively ground the backing to the sector as fully consistent with the *Ordnungspolitik*, namely in reason of a market failure, although it is also stated that such market failure would require support in the long term.

The chemical industry also reacted positively to the idea of an industrial strategy (VCI, 2020). However, the requests attached to this support remained roughly similar to those of the previous period, namely lower energy costs, promotion of the venture capital system, promotion of the hydrogen economy and the incentivization and promotion of research and development. This is consistent with previous calls by the industry for better state engagement in economic promotion, even proposing that the state would pay for the extension of renewable energy capacity out of state budget, rather than taxation on energy use (VCI, 2018b)

The most adverse reaction came factually from the automotive industry, which dedicated a rather extensive policy brief to the proposal (VDA, 2019). In the document, the industry stated that „[t]he NIS, however, places too strong a focus on activating, shaping, technology- and project-oriented dirigiste policy" (VDA, 2019: p.5). The position paper criticizes the industrial political project fundamentally along the whole line and in particular the proposal of a temporary state shareholding facility and the project of reshoring part of the supply chain. Furthermore, the exclusive orientation towards the electric vehicles' technology is strongly criticized, inviting to technological openness to synthetic fuels. Conversely, the VDA asked the government to invest in the digital and roadways infrastructure, to

financially promote research and development, to reduce the tax burden on energy and to solve the shortage of skilled labour. In sum, the state should be active only to promote the “framework conditions” (*Rahmenbedingungen*) that are so dear to the *Ordnungspolitik*.

Beyond the vehement position of the VDA, however, the proposal for a *Beteiligungsfazilität* triggered an almost unanimous rejection by the industry (Interview 18). Industrial opposition seems thus to have been decisive in dumping this measure of high innovational potential in the German industrial-political landscape. Nevertheless, support did not appear to be overly enthusiastic about the general plan either, and the demands posed by the sectors were mostly addressing some competitive gaps attributed to the political level. The only exception that started figuring out as prominent is the subsidization or incentivization of research and development. In this latter respect, there has also been a tendency, on the side of different industries, to demand an increase of these forms of subsidization and incentivization to companies of all the sizes, particularly implying an extension to the larger companies (Interviews 13, 18).

The debate around the National Industrial Strategy brings to the surface a contrast that started emerging between the worlds of politics and business.

On the one hand, the government acknowledged a clear looming problem of competitiveness that threatened the survival of Germany as an industrial location. At the same time, it pursued the promotion of the green transition going through the cheap way, thus avoiding or limiting forms of subsidization. In fact, the debt-to-GDP ratio had been decreasing until 2019 and the extension of state capacity through off-balance-sheet funds and the KfW was not nearly of the size required to face the challenges. What is more, large companies did not really require such credit instruments, since they could have easy access to financial markets, while they rather advocated for a policy of subsidization (Interviews 03, 35, 05).

On the other hand, the core industrial sectors, and within these large businesses especially, have grown highly internationalized over the decades and in many cases have made most of their revenues on foreign markets, with the clearest case being automotive. Large companies in these sectors have clearly hostile views of a trade and industrial policy that would correct foreign trade imbalances and contribute the re-industrialization process. What they advocate for is rather to make the competition environment of the location favourable, in a form of downwards competition on costs. In this respect, Germany is tied on an equal foot against other industrial countries and saving the *Standort Deutschland* is more of a government problem, rather than a corporate problem. The VCI pointed out in several occasions that the early 2010s had set the beginning of an increasing tendency of German chemical companies to invest more abroad than they did inland and, as seen in the previously mentioned DIHK survey, cost considerations have increased their weight over time (DIHK, 2024; VCI, 2016b; 2018a). The association attributed this development to fundamental cost advantages related in particular to electricity and raw materials.

The noticeable pattern here is that the better placed an industry would be at the moment of the industrial plan proposal, the more hostile its stance towards it. For instance, the automotive industry was indeed not performing particularly bad in 2019, when it reported increased revenues against a global recessionary tendency of the global car market (VDA, 2018b; 2020a). Conversely, the steelmaking sector, featured by a lower level of export dependence compared to other sectors, embraced more actively the industrial policy proposal of the government.

This difference between loss in competitiveness of Germany and loss of competitiveness of German conglomerates creates a clear divergence in interests. The industry can do without the home country but not vice-versa. Where the industry struggles, then there seems to be more open ears to the government.

The proposal for a National Industrial Strategy that was commented so far is nevertheless the February 2019 draft, which was meant to provide an incipit for a broader discussion and social dialogue around those industrial policy proposals. The final version of the strategy was published in November 2019 and it is particularly interesting to analyse the differences with the original version.

To begin with, the project of the *Beteiligungsfazilität* disappeared. The idea that the government could directly intervene remains, although only as a last resort and only in the field of technologies that are “[s]ensitive and relevant for national security” (BMWi 2019b: p.28). For the protection of technologies that determine just an economic asset for the country, the government should just act as “facilitator”, while the rescuing function is delegated to “white knights” from the industry.

The interesting note here is that, rather than creating a new instrument, the Ministry decided to use the KfW for such critical situations as “*has already happened in the past for individual cases*” (p. 28). The reference here is most likely to the Hertz50 case of 2018, when the KfW acquired a “temporary” 50% stake in the transmission system operator Hertz50, threatened by a foreign acquisition (BMF, 2018). This was, per se, a remarkable policy innovation in a German context where state ownership has never been the preferred solution, and surprisingly, after the choice was reticently taken, it was opted to keep the stake in the company (Interview 18)

The reason for which the KfW solution cannot be equated to the previously proposed *Beteiligungsfazilität* is that the procedure going through the development bank appears to be more time demanding: “*In the past, however, it has been shown that these kinds of operations are generally time-critical. Therefore, structures must be created, through which the necessary decisions (Bundeskabinett) can be taken faster and more efficiently than has been the case so far*” (BMWi, 2019b: p. 28).

The concern is legitimate, considering the decisional layers that KfW decisions entail, which factually risk creating a stalemate between Vorstand reticence and the minister’s requests²¹. Such decisional steps

²¹ It is nevertheless important to point out that the NIS 2030 declared that the federal government would deliver all the guarantees needed to relieve the bank from the possible liabilities due to the acquired shares. Nevertheless, bargaining can happen on other factors that do not pertain mere risk problems.

may be fit for decisions such as the establishment of a new funding program, but are barely viable when fast paced acquisitions are happening. All in all, this was a step back from the initial proposal.

Another important change in the final draft is the cancellation of the idea of crafting a national champion in the field of artificial intelligence on the model with what was done with Airbus (*KI-Airbus*), which was analogously harshly criticized in the VDA policy statement.

The purpose of “maintaining closed value chains” (*“Erhalt geschlossener Wertschöpfungsketten”*), and the consequent reshoring, which also went under strong criticism by automotive, is also barely mentioned, if not completely omitted, in the final proposal.

Conversely, the final version seems to assimilate the overwhelming majority of demands posed by the industry in the policy documents and statements that followed the publication of the NIS 2030. Although this is partly logical considering that the final draft was the outcome of a process of consultation, the extent to which the “pure” industry positions seems to have won is overwhelming.

These include reduction in taxation, limiting of social insurance burdens, reduction of the tax burden on energy, infrastructure investment and, crucially, labor market flexibilization. The reason for which this latter point is crucial is that trade unions were also allegedly consulted together with the industrial interests, but nowhere in the final version there seems to be some “treat” for labor to support the industrial strategy.

For what concerns KfW programs, the final proposal envisioned the *“[f]inanzielle Stärkung von Förderprogrammen im ‘Investitionsprogramm für Energieeffizienz und Prozesswärme aus erneuerbaren Energien in der Wirtschaft’”(BMW, 2019b: p. 25).*

All in all, the final proposal retained little of the innovative power of the initial draft. Some of the topics raised would nevertheless become compelling at later points and would become more forcefully salient on the later political agendas.

5.2) Caught unprepared: pandemic, war and intensifying foreign competition

By 2020, when the big pandemic crisis erupted, there were thus already fundamental cracks in the overall European industrial building, affected as it was by multiple competitiveness threats. It is nevertheless again important to observe that, especially for what concerns automotive, the competitiveness threat was not so much to be considered in terms of drops in revenues or market shares, but rather in terms of loss of competitiveness of the “Standort Deutschland”, namely of Germany as a place where to produce and create employment. A problem for the country, but much less for the companies.

The EU Green Deal pursued by the Von der Leyen Commission in 2019 posed nevertheless this time a real burden for companies wanting to sell and operate in the European market. The automotive sector was, in this respect, the most heavily hit. Claim of the automotive industry was that the Green deal was setting some goals without “technological neutrality” and factually banning the combustion engine technology, where Europe, and Germany in particular, have a competitive advantage (Interviews 70, 71).

The years between 2020 and 2024 were thus featured by a very rapid acceleration process, not so much in the change of the industrial policy approach of the government, but rather on the changing incentives and structural conditions.

Since the final part of this narrative is rather dense, I will proceed by first outlining the main innovations, or lack thereof, that state finance underwent over the last years. Subsequently, I will point out how such innovations and general industrial policy aided some of core sectors of the German model.

What is generally possible to state, especially considering the interview material and the narrative of the previous sections, is that the two main events that shaped these years, the pandemic and the beginning of the Russian invasion of Ukraine, did not create new fundamental structural challenges. What these two disruptions did, however, was to work as a “stress” test and thereby expose the vulnerabilities of a system that never appeared at the surface before.

To begin with, the Covid-19 crisis highlighted the fragility of global supply chains and the structural dependence of the German manufacturing industry on supplies of advanced chips and raw materials from China. The resulting supply chain crisis hit German exports heavily and created a remarkable slowdown of production (VDA, 2020c). Moreover, the subsequent wave of acquisitions made governments even more wary regarding the threat of a free and very fast-paced market for corporate ownership.

The 2022 breakdown of the diplomatic ties with Russia was just a further hit exasperating the salience of the dangers of relations of dependency. What of really new was added by the war was the external shock of booming energy prices to an economy that was already highly uncompetitive in this regard. Both events thus brought to the surface already recognized and existing problems, that triggered a latent competitiveness shock.

In terms of policy instruments, the two shocks accelerated the use of off-balance sheet instruments, also for purposes of industrial policy.

The first corona crisis determined the establishment of the *Wirtschaftsstabilisierungsfonds* (WSF), a new *Sondervermögen* tasked with aiding the economic recovery. It is again important to remark that the tendency to institute *Sondervermögen* was far from new for the contemporary German policy style.

However, the WSF represented a difference in the extent and in the articulation of the functions attributed to these instruments.

To begin with, the WSF was given a total of 600 billion euros plafond, which made it an enormous rescue package, incomparable with the *Konjunkturpakete I* and *II* of the 2008 crisis. This is barely attributable to a change in the political paradigm, but rather to the nature of the Covid-19 crisis itself, that factually caused the freezing of the productive capacity in virtually any economic sector. Among the 600 billion, 400 were made available for guarantees for liquidity shortages, 100 billion for capital strengthening of companies (mostly equity injections), and 100 billion for the special program of the KfW. Particularly the fact that the new instrument would have such a well-funded function of equity intervention made it a very innovative instrument, since such solution was used, in the past, only for the case of Commerzbank. The instrument was then extended in 2022 to address aid for the energy crisis (*WSF Energiekrise*).

The formulation of the “goals of the fund” in the 2020 Law also provides some interesting insights:

*“Der Wirtschaftsstabilisierungsfonds dient der Stabilisierung von Unternehmen der Realwirtschaft durch Überwindung von Liquiditätsengpässen und durch Schaffung der Rahmenbedingungen für eine Stärkung der Kapitalbasis von Unternehmen, deren Bestandsgefährdung ehrerbliche Auswirkungen auf die Wirtschaft, die **technologische Souveränität, Versorgungssicherheit, kritische Infrastrukturen** oder den Arbeitsmarkt hätte”* (Gesetz zur Errichtung eines Wirtschaftsstabilisierungsfonds; §16, 2020)

The fund does thus not only consider occupational or sheer short-term economic factors, but also the overall consequences for the competitive system, such as “technological sovereignty”. Trials of *Beteiligungsfazität*? Seems plausible. However, the use of equity was controversial and created differences in views within the government coalition.

“Considering how the discussion was set, it was not surprising that shares were taken in Lufthansa, but rather that not more than that was taken” (Interview 18).

Looking at the sheer amounts spent by the fund, it is clear that the sectors most affected by the crisis had the priority. In particular, the 5.8 billion euros of aid to Lufthansa in the form of a “silent participation” (*Stille Beteiligung*), was by far the largest aid provided and gave the government a 20% share into the company. However, especially in the years subsequent to 2020, the fund became more encompassing. Although data on the type of assistance provided is fragmented, considering both loans and equity the WSF aided companies in automotive (€ 68 mln), machinery (€ 31.1 mln), steelmaking (€ 58 mln), shipbuilding (€ 335 mln) and energy (€ 552.5 mln) (Finanzagentur, 2021; 2022; 2023; 2024).

The generous use of loans and shareholding is even more considerable when observing that, in the years between 2020 and 2023, guarantees, once the “lightest” and the previously preferred method of public intervention, were never used (Finanzagentur, 2021; 2022; 2023; 2024).

The aid disbursed directly by the WSF was nevertheless only part of the aid package, and specifically the part that involved the largest companies. The vast majority of the financial room enjoyed by the WSF was indeed used by the KfW, first in the context of the *KfW-Sonderprogramme Corona* and subsequently for the measures to address the energy crisis. Between 2020 and 2023, around 80 billion euros were forwarded to the KfW in the context of the special program, while the measures directly undertaken by the WSF only amounted to 9.7 billion. In 2020, the KfW disbursed 44.5 billion euro for the special program, financed through funds of the WSF, as well as through the “Targeted long-term refinancing operations III” (TLTRO III). The special program was established by easing access and extend already existing programs, as well as establishing new ad-hoc programs such as the *KfW-Schnellkredit* and the “*Direktbeteiligung Konsortialfinanzierung*” (BMWf, 2021b). The programs established in response to the economic effects of the Russian war against Ukraine (“*KfW-Sonderprogramm UBR 2022*” and “*KfW-Sonderprogramm UBR 2022 – Konsortialfinanzierung*”) are largely in continuity with those already established for the pandemic and do not display remarkable differences.

These programs have two interesting features. On the one hand, they are open to both small and large companies, which determines a discontinuity in the historical role of the KfW as a promotional bank limited to the “Mittelstand”. This has also led to concerns and complaints raised by the stakeholders, who were afraid of SMEs being marginalized (Interviews 24, 14). It should also be pointed out, that this happened also in the context of government measures that made vast use of subsidies for smaller businesses. On the other hand, the KfW guaranteed banks with a percentage in the magnitude of 80-90%. Although one may think that this latter aspect of the emergency programs would imply major risk-taking for the KfW, in reality the federal government guaranteed on the lent amount. However, interview material showed that the 90% guarantee for loans to SMEs was rather controversial and led to some bargaining between the government and the *Vorstand* (Interview 35).

More fundamentally, the Covid and the energy crises were a moment of capacity expansion of the German state, and, by extension of the KfW. The role of the BMWK grew remarkably in importance during these years (Interview 42), both because of its role of co-management of the stabilization funds and for the specific nature of the new challenges to be faced. The green transition, the energy crisis, the technological upgrading, the supply chain crisis and the need ensure raw material required a much stronger capacity not only to set some framework conditions, but also to accelerate some wanted economic processes (Interviews 35, 42). The KfW was a fundamental part of this process of capacity expansion, since its expertise in “how to practically do things” and of quickly mobilizing capital were now necessary for the wanted changes to happen fast (Interviews 35, 03). Superficial but important indicator of this process is the increase in the number of employees working for the bank from 6705 in 2019 to 7984 in 2022, namely a 19% increase in only four years.

Therefore, the field of competences of the KfW was also extended. In particular, the process of expanding its customer base beyond the Mittelstand and SMEs, including also larger enterprises has continued, especially during the crisis periods (Interview 35). Moreover, the function of the bank in the field of innovation was further increased in 2020 by delegating to KfW Capital the management of a 10 billion euros-heavy “*Beteiligungsfonds für Zukunftstechnologien*” (also “*Zukunftfonds*”), which was established in order to provide a structured support to start-ups in every phase.

More generally, the period of the Corona and energy crises has been considered to be a period of increased centrality for the KfW, which displayed a remarkable efficiency, flexibility and timeliness in intervening in delivering the emergency credits (Interviews 18, 34). This also contributed to an increased legitimation and positive consideration of the KfW in the eyes of both economic and social stakeholders (Interview 35).

Perhaps paradoxically, this centrality did not come with an abandonment or a relaxation of the banking logics. In 2020, the Verwaltungsrat started discussing the introduction of the Basel IV rules. Moreover, the crisis impacted the bank for its exposition in some specific sectors, especially naval and air transportation, as well as startups. Overall, the exposition to these sectors caused the bank to have to set aside 777 million in risk provision. This accelerated a process of tightening of the bank’s credit policy and the commitment to reduce exposition in the “riskier” sectors (KfW, 2021a). Therefore, the paradoxes and limits of the function of the KfW and its “bank” nature remain in place.

As previously mentioned, the growing sophistication of these instruments of intervention is a response to an accelerated pace of transformation that involved the core sectors of the German model.

5.3) The crisis in automotive and OEMs racing away from the Standort

As can be expected, central in the concerns of policymakers was automotive, which entered a time in which issues over supply chains added up to a forced change in the technological paradigm (Interviews 34, 31). Still in the final draft of the National Industrial Strategy 2030, the position of the automotive industry was accepted, according to which “[G]ermany will not make itself strategically dependent on a single mobility technology” (BMW, 2019b: p. 23).

In 2020, a “regional dialogue” (*Regionaldialog*) was established between the national government and all the stakeholders of the automotive industry (state governments, business associations, OEMs, suppliers, trade unions). In the related documents the general line was that the government should remain open with respect to which technology to promote, and not necessarily pushing for electric vehicles (*Technologieoffenheit*), and even suggested tax incentives for E-fuels (Transformationsdialog, 2020a; 2020c).

However, when looking at the large OEMs investment policy, it can be noticed that there is a very clear investment orientation towards electrification. For instance, Volkswagen planned investments for 74 billion euros until 2025, Daimler 40 billion until 2030 and BMW 30 billion for the timespan 2020-2025 (IW Consult, 2021). Furthermore, interview material reports that German carmakers were very clearly lobbying the political level to avoid to bring E-Fuels in the public debate, due to the market uncertainty this would create for current investments (Interview 31). Largely, OEMs seemed to have been convinced in undertaking the path to electrification.

There are several explanations to these trends. A commonly shared explanation is related to the new European policy of electrification, the so-called “combustion engine ban” for the year 2030 (Interview 70). Other explanations, instead, point to similar developments but in other markets of reference for OEMs. For instance, Chinese regulation on newly registered vehicles and sales quotas for EVs are considered important reasons (Interview 31), as well as the US policy of strong subsidization of electric vehicles production through the IRA (Interviews 31, 04). Looking at the numbers, it is reasonable to argue that both explanations carry some leverage.

In 2019, the revenues from the European market accounted for 40% of Daimler Benz total revenues, 48% of BMW revenues, and 61% of Volkswagen Revenues (Volkswagen AG, 2020; BMW, 2020; Daimler Benz, 2020). A more precise indicator would be the EBIT, which would also account for the location-related factor costs and prices and reflect real profitability of individual areas. Such data is however unavailable at the area level. The sheer size of revenues still provides an important indicator on the economic relevance of the European area for German OEMs. Considering these numbers, German producers could consider the option of producing ICE for the European market, would it not be for the new regulation.

At the same time, however, German OEMs have been particularly invested in targeting growing markets and specifically the Chinese market (interview 31, 70). A mere look at the data on the number of vehicles sales easily helps make sense of this orientation. While in 2005 only 5 million vehicles were sold in China, this number had increased to 25 million in 2019, meaning a increase in the share of global sales from 8% to 38% (IEA, 2020). Conversely, Europe remained stable at a number of 17 million per year, and reduced its share from 29% to 19%. Independently of the opinions on the combustion engine policy of the EU, it is thus widely agreed that automotive companies cannot do without the Chinese market (Interviews 70, 31). Whether this is factually true in perspective or not is of little relevance for the present purpose.²² What is relevant is that this is the framework that German OEMs had in mind when undertaking their investment decisions, namely occupying a growing market. Therefore, Chinese regulation on the NEV credits promoting electric vehicles quotas and the strong promotion of the electric

²² Such evaluation assumes that the purchasing power of the growing market will keep growing uninterrupted over time, which is something that can barely being taken for granted, considering the historical developments in first-mover capitalist economies.

technology in the country could not be ignored, as could not be ignored the developments on the US market, where the strong subsidization policy made room for a rise in demand.

For OEMs, the fully-fledged shift to electrification seems to have been a problem especially because the sales of combustion engine vehicles were not a viable source of profit to subsidize the electric vehicle branch of activity (Interview 70). Due to the higher production costs of electric vehicles, especially R&D and the still high costs of batteries, electric vehicles were scarcely profitable for several OEMs, especially those producing for the mass market, while those producing for the luxury brands had higher leeway in charging higher prices (Interview 31). Therefore, companies could use higher margins from ICE vehicles to make the transition to the business segment of BEVs more gradual and sustainable (Interview 70).

Therefore, both European regulation and developments in the global market have contributed to the electric vehicles shift. Taking these factors jointly, German carmakers have been “cornered” into producing only EVs, thus increasing the speed and reach of the ongoing change.

However, OEMs and their largest Tier-1 suppliers have managed this shift through the adaptation strategies allowed by mobility and internationalization. The biggest burden of the transformation is carried by suppliers, and specifically by those who are exclusively active in the combustion engine, which account for 22% of the total employment in German automotive (IW Consult, 2021). Suppliers have been hit in two respects.

First, with reduced orders for combustion engine components, suppliers’ revenues drop which leads to lower capital available to invest in converting the business towards new segments (Transformationsdialog, 2020b; 2020c). As a consequence, automotive suppliers have also undergone remarkable obstacles in obtaining external finance by banks, which have also charged higher interest rates (Transformationsdialog, 2020c).

Second, electric cars have a much simpler architecture compared to combustion engine cars, implying that their production is much less labor intensive, while some components will become completely obsolete in a perspective of producing almost exclusively electric cars²³. This implies that OEMs start having excess labor force, which they then try to re-employ towards functions, including R&D, that were previously delegated to suppliers (Interview 70). This structurally leads to a shrinkage of the supply chain.

Therefore, while OEMs are pressured by regulation and global conditions to shift to electric vehicles production, a large number of suppliers, especially the smaller, are in a simultaneous situation of decreasing revenues and lower availability of capital. Moreover, already before the energy crisis,

²³ More specifically, combustion engines, starter and alternator machines, exhaust gas systems, fuel supply and transmission would be completely removed (IW Consult, 2021).

suppliers were already experiencing problems related to the high price pressure that was exerted by a situation of “demand concentration” (*Nachfragekonzentration*) and thus a low bargaining power vis-à-vis OEMs (Transformationsdialog, 2020c). In particular, it was reported that OEMs decline quantity and price commitments more frequently.

“Therefore, points of friction between manufacturers and suppliers that require energy and time should be minimized. Supporting suppliers in individual cases requires an efficient balancing of the interests of different stakeholder groups” (Transformationsdialog, 2020c: p. 9).

In the *Transformationsdialog*, the suppliers and stakeholders articulated a series of demands to the government. Among the main goals of the initiative was the identification of the main problems and of potential solutions for the crisis of the domestic automotive production location, by supporting companies to search other fields of application for their specific competences (Transformationsdialog, 2020b).

First, the strengthening of the capital structure of suppliers’ companies was considered to be an urgent priority, since the changes occurring are highly investment intensive and, at the same time, banks restricted credit to the industry and charged higher interest rates. In this respect, provision of equity capital to companies was seen as an instrument in order to enable the access to external finance (debt) (Transformationsdialog, 2020c). For this purpose, the industry demanded the expansion of available options including venture capital, private equity funding, related KfW programs, as well as state regional and promotional banks. It is interesting in this respect that the setup of the programs, especially KfW programs were matter of discussion regarding their sufficiency and effectiveness. In this respect, mention was done regarding the problem of certainty of funding, hinting to the fact that resources may have been too limited for the goals set.

“There is sometimes frustration among companies, when they apply to programs that are not set up with sufficient means, and this is not communicated. It is important that, as soon as the means are exhausted, the information becomes public, so that companies do not invest resources in a sometimes very complex application” (Transformationsdialog, 2020: p. 16).

Second, it is suggested to set up instruments of transregional cooperation, especially with respect to R&D projects and applied innovation (Transformationsdialog, 2020b; 2020c). In this respect it is often pointed out that problems arise regarding scarce availability to exchange information within clusters. It is proposed that coordination would be enhanced also with the purpose of facilitating the applied phase of technologies, by identifying the ones with largest innovation potential.

Third, promotional instruments should be set up and catered to the needs of the regions, according to the extent to which they are affected by the change (Transformationsdialog, 2020a). A subsequent study commissioned by the Transformationsdialog would in fact point out that, especially from the point of

view of employment, the southern regions would be the ones most affected by changes in automotive (IW Consult, 2021).

Fourth, high relevance is given to a reform state aid regulation at the national, local and EU level. In particular, it is demanded that state aid regulation would include companies until 500 employees in the definition of SME (Transformationsdialog, 2020a; 2020b; 2020c).

"In order to effectively support companies in the transformation and also to enable non-SMEs to receive broader support (financing) for investment, the participants to the Regionaldialog I propose that the existing limitations in the regional aid legislation should be lifted, according to which only construction and diversification investments are eligible for funding, but not, for instance expansion and/or modernization investments within the same NACE-code". (Transformationsdialog, 2020a: p. 10)

Fifth, a series of horizontal measures are demanded including investment in infrastructure, tax deductions for digital innovation goods, improvement of tax deductions for R&D.

Additionally, there were a series of proposals that were put on the agenda by IG Metall, but seen with skepticism and not further discussed by other participants. These include the creation of a fund with a complementary participation of the federal state or the KfW, which would play the role of a market creator by means of signaling. Particularly interesting is the proposal by the IG Metall of the "Konzept der Best Owner Group" (BOG). This envisioned the creation of an equity fund which would takeover the majority of companies undergoing a fundamental crisis due to the reduction in the ICE business, in order to accompany them towards new business segments. This would serve the function of securing supply chains and protecting these companies from hedge funds (Transformationsdialog, 2020c). Also here, it is proposed that the state, and specifically the KfW would enter complementary to private investors, also by expanding the functions of KfW Capital, which are now limited to venture capital.

The pandemic, the disruption of supply chains and the energy crisis determined a turning point when the demands of the car industry became more encompassing.

The crisis hit German carmakers comparatively more than international competitors, causing a serious drop in orders (VDA, 2022). This contributed to raise awareness regarding the need of ensuring supply chain resilience and a constant flow of intermediate parts and raw materials (Interviews 34, 38). This led automotive to raise concerns over high tech production, in particular the semiconductor industry, whose strategic importance has become more important in times of electrification of mobility, since electric cars require a higher amount of chips than combustion-engine cars. The automotive industry thus started supporting a plan for increasing the European capacity in the semiconductor industry (VDA, 2023b).

Further concerns for the car industry came from the end of the era of low interest rates, during which access to credit did not seem to be a particular issue. In a policy paper of 2023, the VDA reported that

the suppliers from the Mittelstand are finding it increasingly difficult to access cheap finance to finance the necessary large pre-orders, since banks have restrained their lending behavior (VDA, 2023b). This is due to a particular coincidence of increasing regulatory requirements by the Basel IV framework and rising interest rates. It is particularly noticeable that the VDA calls precisely state promotional finance into question, arguing that access to the promotional programs (the ERP-Beteiligungsprogramm is named) is burdened with bureaucratic requirements and very restrictive in the possibility to access. Therefore, among the requests is a relaxation of lending criteria for promotional programs, as well as a reconsideration of the criteria for defining an applying company as “company in difficulties” (*Unternehmen in Schwierigkeiten*), since such definition automatically excludes several companies from the range of applicants.

When it comes to the political response to the demands of the national stakeholders and the large producers, it is interesting to observe that the national governments’ response has largely been to focus on providing the optimal conditions for the domestic EV industry to thrive, while close to no attention has been devoted to the problem of bridging the suppliers of the combustion engine industry out of the structural crisis (Interview 31). As already seen in previous instances, the situation looks very different at the regional (Land) level, where the problem of the transition is tightly connected with the loss of productive capacity and workplaces, and where industrial policy solutions to avoid this outcome are being discussed (Interview 08). So far, however, the financial capacity of the local governments to support this process is limited (Interviews 08, 10).

The year 2020 and the related conjunctural programs for the pandemic marked the introduction of new governmental programs in support of the competitiveness of suppliers in the *Standort*.

Demand for electric vehicles was stimulated by means of a temporary strengthening of the *Umweltbonus* during the pandemic (*Innovationsprämie*), which was prolonged until the end of 2022 by the subsequent government. In particular, the *Innovationsprämie* made so that the share of the bonus paid for by the state would be doubled, meaning the that state would take on a remarkably higher financial burden from the measure²⁴ (Bundestag, 2022a). The following *Ampelkoalition* restricted the field of application of the Umweltbonus, by excluding Plug-In-Hybrid vehicles and reducing the subsidy rates for the battery-powered vehicles (BMWK, 2022b). The cost of the measures for the financing of new eco-friendly vehicles for the years between Juli 2016 and June 2022 was estimated to be around 5.5 billion euros, around 3.5 billion of which was spent between 2021 and 2022 (Bundestag, 2022a: p. 2-3). German producers had an estimated benefit of 1.5 billion euros from new sales triggered by the incentive (Der Spiegel, 2022). Predictably, this turned out to be the most “expensive” measure in support of the industry, but also the least targeted, which made the Umweltbonus one of the casualties of the budget

²⁴ The bonus worked according to a scheme that entailed a share of the “bonus” paid for by the car producers (through a discount) and a share paid for in the form of a state subsidy.

crisis of December 2023, when the government eventually interrupted the program, raising hefty criticism from the VDA, but even from the SPD itself (Tagesspiegel, 2023; VDA, 2023a).

From the point of view of strictly supply-side measures, namely those aimed at fostering the competitiveness of the *Standort*, and especially the suppliers, what has been proposed are overwhelmingly productivity and innovation-oriented policies. Similarly to the demand policies, these were also more aimed at helping the “winners” of the transition, rather than bridging the losers. This makes up a common ground regarding all the programs that were set up at the national level in this period²⁵. In particular, the flagship program of this kind was the “*Bonus-Programm für Zukunftsinvestitionen der Fahrzeughersteller und der Zulieferindustrie*“, whereby the government provided funding for projects related to Industry 4.0, R&D and innovation processes. Initially equipped with 2 billion euros, the program was created in the frame of the conjuncture economic package of the government in 2020 and then continued to these days. The 4 modules that make up the program are aimed at increasing efficiency in production processes (Module a1, a2), promoting R&D in new vehicle and system technologies (Modul b), and to buildup regional innovation clusters (Modul c) (BMW, 2024c). In 2020, the government also set up a “Future Fund for Automotive” (*Zukunftsfonds Automobilindustrie*), initially equipped with 1 billion euros for the timespan between 2021 and 2025. This was also strongly focused on technology and knowledge transfers, digitalization, circular economy and further education and reskilling. By 2023, 104.4 million euros were disbursed by the fund, overwhelmingly in projects related to technology transfer and digitalization²⁶ (Bundestag, 2023a). In the context of the conjuncture package, the classical policy of R&D promotion was also employed, with 2.5 billion euros provided for investments in R&D related to electromobility and Battery (BMW, 2021b).

Where a much more vertical approach was adopted and more evident is in the promotion of a domestic, or at least European, battery industry for electric vehicles.

The most popular case was Northvolt, which received 700 million euros in subsidies and facilitations, as well as at least two KfW loans for capacity expansion both in Schleswig-Holstein (600 million EUR) and in Sweden (188 million USD), and a 200 million euros-worth guarantee by the Land Schleswig-Holstein (Bloomberg, 2024, Bundestag, 2024a; KfW-IPEX, 2024a; Die Welt, 2024a). The KfW loan was guaranteed by the federal government and, considering the final bankruptcy of Northvolt in 2024, may now have to be reimbursed.

²⁵ Examples. “Bonus-Programm für Zukunftsinvestitionen der Fahrzeughersteller und der Zulieferindustrie“, the „Neuer Fahrzeug und Systemtechnologien“, „Batterie 2020 Transfer“ (140 mln EUR, 2021-2026); „EXIST“ (startups, 104, mln EUR), „Forschungsagenda Nachhaltige urbane Mobilität“(Transformationsdialog, 2020c).

²⁶ It should be remarked that the resources of the fund are actually divided between the three concerned ministries, namely the Federal Ministry of the Economy and Climate Protection (BMW), the Federal Ministry for Digitalization and Transport Infrastructure (BMDV), the Federal Ministry for Education and Research (BMBF) and the Ministry for Labour and Social Affairs (BMAS).

Although Northvolt was the individually most expensive project, the policy of subsidization for battery technology R&D and application has been extensive, especially after 2019, as can be seen from an inquiry at the German Bundestag (Bundestag, 2024a). In the list of the subsidy recipients figure many prominent names of the German industry. The major domestic car producers received, between 2017 and 2023, 163 million euros in subsidies and facilitations, 132 of which accounted for by BMW alone (Bundestag, 2024a). Similarly, BASF received a total of roughly 188 million euros. Furthermore, an amount of 437 million euros was also disbursed to the joint venture Automotive Cells Company Deutschland GmbH, including Mercedes-Benz, Stellantis and TotalEnergies as main shareholders (Acc, 2024).

The success of such policies has been highly mixed, as the recent bankruptcies of some subsidized battery producers highlight. Beyond Northvolt, a case of remarkable failure was the total of 23 million euros of subsidies provided to Blackstone Technology GmbH, which also filed for bankruptcy in 2023 (Bundestag, 2023b). In this latter case, one of the most astounding facts is the apparently scarce information of the government regarding the condition of the company (Bundestag, 2023b).

Further support to electrification was given by the infrastructure policies, and specifically by the *Masterplan Ladeinfrastruktur I*, introduced in 2019, and which was financed through subsidies the installation of electric charging stations both for public use and for domestic use. The plan was then continued in 2022, by the subsequent government, under the name *Masterplan Ladeinfrastruktur II*. With the support of these programs, already by 2021, the number of the electric charging stations in Germany had been raised from around 10.000 in 2017 to more than 50.000 in 2021 (BMW, 2022c).

Further political means of support for the Automotive industry included aid in opening new markets, for instance through cooperation with the Federal Ministry for economic cooperation (*Bundesministerium für wirtschaftliche Zusammenarbeit, BMZ*) (VDA, 2018b).

From these policies it is thus evident that German industrial policy has been overwhelmingly geared towards the strengthening the competitiveness of the Standort for electric vehicle production, by maintaining a window open on developments in hydrogen technology and some funding for synthetic fuels development (Bundestag, 2022b)²⁷. However, the greater stress is by far on electric mobility (Interview 31).

Politically, the idea of re-launching the Bio-Fuels, part of the platform of the combustion engine part producers, was raised to relevance only seldomly by the FDP (Interview 31). The CDU attitude was instead more ambiguous, but generally more supportive of electrification. This consensus is nevertheless

²⁷ In this respect, the *„Gesamtkonzept Erneuerbare Kraftstoffe“* makes available 1.9 billion euros for the timespan 2022-2026 for the development and market introduction of E-Fuels and Biofuels (Bundestag, 2022b).

more fluid than it first may appear and it is still to be seen the impact that the slowing down of demand for electric cars will have on the positioning of large OEMs and politicians.

More generally, it is unclear how the positions of the German automotive industry will evolve in light of the competitiveness crisis that not only the “*Standort Deutschland*”, but also the national champions are facing. German producers are starting to experience difficulties right in their largest markets of reference: China and the US. In the USA the car market recovery was limited also due to supply chain limitations.

In China, despite automotive market growth in 2021, German producers sold 510.000 cars less than the previous year, seeing a drop of market share (VDA, 2022). In the electric vehicle market, the situation is even more worrying, since German carmakers enjoyed a 9.2% share in 2020, which fell to 6.5% in 2021 and raised back to 9% in 2022. In 2023, Volkswagen started losing not only in terms of share but also in absolute numbers (Handelsblatt, 2024j1). In the general automotive market (thus including ICE vehicles) the share of German carmakers fell from 26.5% in 2020 to 21.8% in 2023, largely driven by the fall in Volkswagen revenues, but also more marginally by Mercedes and BMW (Handelsblatt, 2024j1). This loss is due both to generous subsidization policy of the Chinese government for local producers and for the less established position of German carmakers on the electric vehicles market, which makes them structurally less competitive when the policy direction goes towards electrification. This latter aspect is valid for both Volkswagen and higher tier producers.

As a consequence, the share of the Chinese market on the total revenues of the German car producers saw a decrease from 39.4% in 2020 to 34.3% in 2023. It seems that, in a competitiveness perspective, the most concerned by this trend should be the entry-level carmakers like Volkswagen, since the higher-tier carmakers compete less on price (Interview 31). Nevertheless, it may be a matter of time before this “quality factor” stops being a competitive advantage, as it happened for the case of shipbuilding (Interview 09, 10).

Carmakers are thus trapped between a rising market where they do not have an established position, and where they have to compete with equally advanced but more convenient OEMs, and a home market where they struggle to sell EVs due to the high pricing and generally sluggish demand. Also at the higher tier of the market, the competition of Tesla, a first mover in battery technology, is a worrying factor.

Furthermore, this happens in a context where the vast majority of vehicles has been produced abroad. According to data from the VDA (2022: p. 68-69), stagnation in the growth of domestically produced vehicles in Germany is a trend dating back to the 2000s, when growth started decelerating. However, in 2021, domestic production saw a staggering drop from more than 5 million vehicles in 2016, to around 3 million in 2021. Production of German OEMs abroad dropped, but much less and remained solidly higher than 9 million vehicles from 2018 onwards.

This strong internationalization of German carmakers, effect of their attempt to search for locational advantages (e.g. cheap labor force, energy) and to reach new markets, also provides them with higher structural power and lower willingness to compromise on employment levels. This is how the Volkswagen Group could announce the largest restructuring of its history and trade unions eventually accepted a compromise for 35.000 “socially sustainable” layoffs by the end of the decade, and a decrease of 700.000 in the domestically produced vehicles (Handelsblatt, 2024i1).

The policy that the government has been undertaking vis-à-vis carmakers resembles indeed more of a beggar-thy-neighbor style. In fact, no discussion was done to compel Volkswagen to maintain investment levels, possibly through an increase in the direct participation in the company. This may also be because the layoff program was announced precisely in the moment of highest fragility of the *Ampelkoalition*, namely right after the government coalition broke down. As the German automotive crisis deepens, appeals for more direct forms of industrial policy and for the reintroduction of a form of *Umweltbonus* or for funds for rescuing suppliers start multiplying even at the right side of the political spectrum, and the EU policy of electrification starts being contested (Handelsblatt, 2024k1).

The direct participation of the Land Niedersachsen seems to have historically helped to craft deals that supported the maintenance of employment levels by the car manufacturer, thus providing a strong instrument of influence of the *Standort* over the large conglomerate (Interview 08). However, the fieldwork for this book was done long before Volkswagen announced its restructuring plan and thus I cannot draw conclusions on whether there has been in a break, compared to the past, in the effectiveness of this instrument of influence. The results seem nevertheless to point in that direction.

Therefore, this brief overview of the unfolding of events in German car manufacturing relates to the main arguments of this book in many respects. First, German OEMs are nowadays more oriented towards what happens in the extra-EU markets incomparably more than they were in the past, due to the growing demand and supply-side relevance of those markets. This also includes a higher structural power vis-à-vis a German state whose coercive instruments have been politically and administratively weak and who rather engaged in a “safer” but less efficient policy of subsidization.

Second, the importance of automotive arises from the fact that perhaps no other sector that I consider in this work enjoyed such a high extent of political attention and ad-hoc programs. The need for state activism, however, only raised to salience when the crisis of German automotive was looming, namely when the domestic industrial structure was stumbling into the competitiveness crisis. Later, the OEM crisis would add up to the picture, accelerating the contrast between carmakers and the *Standort*. However, this should not deceive into thinking that this “vertical” form of industrial policy is also a form of direct or “deep” policy. Contrariwise, there is a large degree of delegation. The highest political level seems still to rely massively on the German tradition of corporatism, as the several stakeholder-driven forums such as the *Transformationsdialog* or the *Expertenkreis Transformation der Automobilwirtschaft* show. These forums are however of weak and consultative nature. Factually, what

strikes of some parts of the *Transformationsdialog* is how indeterminate certain commitments remain. Many goals and tasks, especially those that require action on the side of the industry, are stated without any actor taking responsibility or binding themselves to pursue them.

This leads to a third matter of interest, namely the scarce capacity of the state to intervene directly. The ministerial bureaucracy relies to a large extent on the cooperation of the industry and its organizations for acquiring the knowledge for these programs (Interviews 03, 13). This information asymmetry, due to a lack of a properly industrial expertise, makes it more difficult for the government to intervene directly and opens the door to “blind” forms of subsidization of the kind seen for the battery makers. At the same time it also strikes as surprising how the bankruptcy of battery makers for whom the government committed such a large financial firepower was just “accepted” without thinking of bailing them out just out of strategic reasons. This may be due to the scarce political capacity that the German state has displayed to go beyond the budget rules and promote less market-oriented forms of industrial policy. Surely, the liberal-orthodox stance of the FDP and its Finance Minister within the coalition made up the most considerable obstacle for a policy of this kind. The *Umweltbonus* also fell victim of the same logic, although the reasons may be deeper, and namely related to the relatively scarce effectiveness of this policy in maintaining employment levels, as will also be highlighted in the chapter on Italy.

In the next section, we shift to one of the sectors whose structural dependence on automotive is the highest, namely steelmaking.

5.4) Steelmaking between overcapacity and transition

As other intermediate sectors, the steelmaking industry started feeling the competitive pressure from foreign steelmakers much earlier than automotive.

Steel production had already declined by 11% by the year 2019 compared to 2011, but the Covid and war crises brought the production to levels as low as those of the 2009 crisis, especially affecting the smaller electric steel producers (WVS, 2023a). The Covid and the war crises worsened the situation by means of both their effect on the supply chain and on the prices of raw materials. Beyond the notorious steep increase in the prices of natural gas, the prices of some raw materials also increased dramatically, affecting also the electric furnaces production. The price of steel scrap, fundamental raw material for the electric furnaces production, almost doubled between 2020 and 2022, experiencing a moderate decline only in 2023 (Statista, 2024a).

Moreover, the situation of global steel overcapacity exerted pressure on margins in a sector where the capacity utilization was already as low as 70.8% (Statista, 2024b). Furthermore, it should not be neglected the important role of the deceleration of demand by the largest “steel consumers”. As

highlighted by the *Wirtschaftsvereinigung Stahl* report, the construction and automotive industries accounted for 33% and 28% of steel consumption in Germany (WVS, 2023a). The deceleration of these sectors in the last years thus contributed to a further pressure on demand, especially in a sector featured by lower export-intensity.

The challenges due to the green transition are also particularly demanding for German steelmakers. In particular, the German steelmaking industry has been highly reliant on coal-powered furnaces and thus subject to a particularly costly green transition. Considering that coal-powered furnaces are specialized in products and processes that can only partially be replaced by electric furnaces, the simple electrification is not an encompassing option in the German case, due to the market specialization of its industries (Interview 12). The more viable solution for decarbonizing the sector is thus hydrogen, which requires massive investments for replacing plants and, at the same time, investment in infrastructure. The costs of the transformation for the sector were estimated to be around 30 billion euros until 2050, 10 billion of which to be employed until 2030 (BMW, 2020a).

It helps to remind that the German steelmaking sector endorsed, in the past, an ordoliberal approach to the policy of adjustment for the steel sector. This is not the case at this timepoint, when, as mentioned, the steelmaking sector was the most willing to cooperate with the government on the Industrial Strategy 2030.

As previously mentioned, it is presumable that the particularly difficult situation of steelmaking led to a higher propensity by the industry to cooperate with the government and to accept a much more encompassing industrial strategy more enthusiastically than sectors, like automotive, where the industry was better placed.

Therefore, the BMW and steelmakers agreed on the *Handlungskonzept Stahl*, a BMW programme aimed at relaunching the steelmaking industry and sustaining it through the green transition. The plan covers a wide variety of aspects of steelmaking, making it a remarkable attempt at policy coordination between different fields (BMW, 2020a). To begin with, the government committed to try to push for the solution of the steel overcapacity problem in the international arenas such as the Global Forum on Steel Excess Capacity (GFSEC) or the EU protection mechanisms for steel. Second, the government committed to stand for a revision of the ETS rules in the European arena, in a way that would avoid carbon leakage phenomena affecting steel production. Third, the government committed to act in order to stimulate the demand for green steel, hypothesizing a series of methods such as a quota for CO₂-Poor steel in final products. Fourth, Carbon Contracts for Difference (CCfD) are mentioned as a way to give companies certainty that the investment in alternative technologies would not be economically unviable or disadvantageous. Fifth, supporting a national market for green hydrogen through the “National Strategy for Hydrogen” (*Nationale Wasserstoffstrategie, NWS*) is considered to be a fundamental step for the production of green steel. All of these goals would also be pursued through a series of funding programmes, such as the *Wasserstoffeinsatz in der Industrieproduktion* (with a 430 million funding

capacity until 2024), the “*Nationale Dekarbonisierungsprogramm*” (1 billion euros until 2023), the “*CO₂-Vermeidung in der Grundstoffindustrie*” (370 million euros until 2023), the “*Carbon2Chem*” (140 million), the “*Klim-Pro-Industrie*” (80 million) and the “*Realbore der Energiewende*” (415 million for 2020-2023). These programmes are not exclusively targeted to steelmakers, but steelmaking is mentioned one of the main beneficiaries of them, especially since the industry is one of the main national polluters and thus a priority in the decarbonization efforts (BMW_i, 2020a). Furthermore, for the timespan 2021-2024 the financial support that is relevant to the sector was increased by 5 billion euros (BMW_i et al., 2021).

It is worth stressing that these programmes do not only respond to a logic of environmental conversion, but they are overtly addressed at an improvement of the competitive position of the German steelmaking industry. This should happen not only by defending the market position in traditional steel, but rather by promoting an upgrading process to green steel, which the industrial association of steelmakers seems to have accepted as a promising strategy for relaunching the sector’s position (WVS, 2023a). This should also be implemented not only by the mentioned promotional instruments, but also by actively regulating both the public procurement criteria and by setting quotas for low-CO₂ steel in end products (BMW_i, 2020a: p. 4). Moreover, the need was raised for proper certification process for “green steel”, so that the market can be established and the necessary investment given certainty (Interview 12). For this latter aspect, a “*Konzept Leitmärkte für klimafreundliche Grundstoffe*” is being devised in 2024, including more specific definitions for „green” steel, cement and other chemicals such as ammonia and ethylene.

Placing German steelmakers as potential leaders for green steel also meant the introduction of a hydrogen solution for steel production, especially considering that the specialization of German steelmakers did not lend itself to an electric furnace solution. Excluding electric furnaces, the only option to replace steel production is through the use of hydrogen and, for green steel, this means green hydrogen²⁸. For this reason, the *National Wasserstoffstrategie* (NWS) stood out as a particularly important step for the type of portfolio of the steelmaking industry (Interview 12).

Therefore, overall, the *Handlungskonzept Stahl* was strongly welcomed by the steelmaking industry, although the implementation speed has been rather limited, especially with the respect to setting some framework conditions such as the labelling for “green steel” (Interview 12). Furthermore, the plan barely scratches the surface of one of the biggest problems the industry has been facing, namely that of electricity prices, although such problem tends to be addressed in more general plans, rather than in

²⁸ According to the method of production, hydrogen can be “grey”, “blue” or “green”. Grey and blue hydrogen extract hydrogen by using natural gas, with the only difference that the CO₂ produced by the grey hydrogen process is released in the atmosphere, while the blue hydrogen process uses carbon capture technologies. Conversely, green hydrogen does not make any use of fossil fuels, and instead extracts hydrogen from water by using a process of electrolysis powered by renewable energy sources.

industry-specific ones, which risk figuring as vertical subsidies, which would be obstructed by the Commission.

Company crises in steelmaking, however, would force very soon the hand of the government to at least provide some “vertical” financial support.

This was the case, for instance of the Thyssenkrupp crisis. In 2020, the conglomerate experienced a deep crisis during the pandemic and found no other option than looking for investors to inject capital. This situation was seen with concern by trade unions, who feared a situation of the kind that we will see for the Italian ILVA, namely of an investor buying the company but not investing the maintenance of the production levels. The IG Metall overtly asked a financial support by the state also by entering the ownership of the company (Handelsblatt, 2020a). Both the Land NRW and the federal government however stepped back, arguing that a direct state shareholding on the Lufthansa model was not an option. Furthermore, opposition came also from the world of industry, with the machinery business association, the VDMA, opposing a possible entrance of the state in the capital of the company (Handelsblatt, 2020b). This attitude of the government towards a participation in the steel business of Thyssenkrupp did not change with the new *Ampelkoalition*.

Irrespectively of the ownership issue, it is interesting to notice that the push for subsidization was backed by a cohesive coalition made up of the company, the local political authorities and trade unions, which strongly pressured on the government to obtain aid also by threatening collective action including strikes (Interview 30). In 2023, Thyssenkrupp obtained a 2 billion financing, from the federal and local governments, for the reconversion project to hydrogen-based plants in the frame of the IPCEI (Thyssenkrupp, 2023a).

In front of a renewed crisis situation of the company, in august 2024, the BMWK stated that there is no intention to enter the capital of Thyssenkrupp, despite the company reporting considerable losses, and despite the stated plan to drop the production volumes to a level that would imply the layoff of 20% of the workforce (Die Welt, 2024b; Handelsblatt, 2024n1; Thyssenkrupp, 2023b). Conversely, the Federal government tasked the KfW of considering a strategic participation into the warship business of ThyssenKrupp AG (Handelsblatt, 2024o1).

Two aspects are worth to be remarked regarding steelmaking sector. First, the deep crisis situation of the sector, due to its position of supplier of intermediate products exposed to high price competition, made so that it would be comparatively more open and active in asking state intervention. Second, an industrial policy plan for steelmaking came relatively straightforwardly when the government became aware of the structural crisis of the sector. However, the state declined firmly any type of direct participation in companies in crisis. No clear answer regarding the reasons of this stepping back of the state are to be found in the empirical material I have gathered so far. Beyond opposition from other industrial sectors, there seems to have been an ideological refusal of the government to enter the

ownership of the company, especially considering the perspective struggles in maintaining high production volumes.

The green conversion of steelmaking is nevertheless strongly intertwined with one of the most budget-heavy measures that was here mentioned, namely the National Hydrogen Strategy for which the 2020 coalition agreement for the Corona-aids made available 9 billion euros. In the next section I will briefly discuss this strategy, since it is one of the most innovative and relevant initiatives undertaken in the new industrial policy framework.

5.5) Crafting new exporters: the national hydrogen strategy

The NWS was approved in 2020, setting up a 40-points plan aimed at accelerating the practical implementation of hydrogen as an alternative power source for sectors for which other “green” alternatives were missing (BMW, 2020b).

The strategy stands out as highly ambitious and encompassing all the phases of the hydrogen production chain, from research and development, to hydrogen infrastructure and market creation. Particular stress is posed, at this phase of planning, on the creation of a working infrastructure, including hydrogen storage, pipelines, shipping facilities and electrolyzers.

The instruments used by the plan are also highly heterogeneous, including the reform of the energy costs and the related incentives, financing of electrolyzers and fuelling infrastructure and the promotion of a competitive domestic suppliers’ industry of fuel cell systems. Among the most important measures there is the subsidization of both investment costs (CAPEX) and the operational costs (OPEX) of electrolyzers. The latter would be implemented through a pilot programme for “Carbon Contracts for Difference” (CfD). With CfDs, the government subsidizes the costs of implementation of new decarbonized technologies for energy generation, making so that companies would not incur into extra energy costs (and thus competitive disadvantage) due to higher energy prices. The idea is that, with time, the scale effect will make operational costs of renewables cheaper and aligned to the old energy sources. The pilot phase includes the steel and chemical industries as main beneficiaries, with the perspective of further expanding the reach of the project at later points.

A further important instrument in this strategy is the setting in motion of the “Important Projects of Common European Interest” (IPCEI) that the Commission expanded to the field of hydrogen, and for which the national government and the Länder made available 13.5 billion euros for 62 projects, participating by 70% and 30% respectively (BMW, 2024a). These projects are considered particularly important in order to create a core German 1.800 km long network of hydrogen infrastructure that could then lead to a Europe-wide network (a “*European Hydrogen Backbone*”), ensuring a safe and consistent

delivery of hydrogen to Germany (BMWK, 2023a). This latter project would lead to 4.500 km of hydrogen pipelines, 3.000 of which converted from the already existing natural gas pipelines.

The change in government of 2021 did not alter the development of the NWS, which was confirmed and further articulated in 2023 (BMWK, 2023a). The new strategy accelerates the build-up of the hydrogen infrastructure, especially electrolyzers, connecting it with an expansion of offshore wind power, and doubling the 2030 target from 5 GW of capacity to 10 GW. Furthermore, existing financing instruments are to be continued and expanded, but direct financing from the state is only granted for green hydrogen.

In 2023, the Contract for Difference concept was finally introduced, especially targeting large enterprises, with the instrument of the “*Klimaschutzverträge*” (BMWK, 2023b). These subsidies should pay both for investment and for operational costs of new “green” plants, although with the idea that they should be paid back once green energy sources (e.g. hydrogen) would become cheaper than the polluting equivalent.

The *Bundesförderung Industrie und Klimaschutz* (BIK), which subsidizes new investment in emission-reducing plants and technology, also provides a further support instrument for the hydrogen economy, in that hydrogen is not only explicitly mentioned, but also subject to a more favorable treatment in terms of “subsidization intensity” (BMWK, 2024b²⁹).

In mid-2024, the NWS was further complemented by an *Importstrategie Wasserstoff*, targeted at building a working infrastructure to import very large amounts of hydrogen, since it is estimated that between 50% and 70% of the German hydrogen demand will have to be satisfied through imports (BMWK, 2024a). Here the instruments largely overlap with those of the NWS 2023, putting particular stress on ensuring international cooperation for a working infrastructure. Beyond the already mentioned Projects of Common European Interest, an important role is played by the programme H2Global, by which the government uses a public-participated company to promote the import of hydrogen to Germany from outside Europe, playing a role of matchmaker between demand and supply. For H2Global, a “funding window” of 3.5 billion is in preparation. The infrastructure projects also include dockyards, thus connecting the NWS to the “National Harbor Strategy” (*Nationale Hafenstrategie*).

Beyond these mentioned new programmes, the older programmes for the support of R&D and application of hydrogen projects are continued. In particular, the *Nationale Innovationsprogramm Wasserstoff und Brennstoffzellentechnologie Phase II* (NIP) is especially focused on promoting advancement in the field of hydrogen-based mobility (BMVI, 2016; 2021).

Perhaps, even more importantly, the hydrogen sector has also featured an important transformation from an industrial political point of view, namely the use of state ownership for industrial political purposes which has few precedents in the German case. Accompanied by strong critiques by competing

²⁹ See BMWK (2024b) Section 5.1, (2), b); Section 5.5.1, (5); Section 5.5.2 (3).

companies, the government decided, in August 2024, to acquire the gas infrastructure company *Gascade* through the state-owned gas conglomerate *Sefer*. The concerns expressed by competitors is that, by this acquisition, the state-owned enterprise may dominate the build-up of the hydrogen infrastructure (Handelsblatt, 2024k). Overall, this course of action is emblematic of the need for fast intervention that the government may not be seeing as realistically happening through the policymaking-as-usual approach.

A list of all the instruments and initiatives related to the national strategy for hydrogen is beyond the scope of this chapter, since it would take too much space and deviate the attention from the main aspects of interest. There are two aspects to point out that are of particular interest when considering the remarkable ambitions of this initiative.

On the one hand, the strategic positioning of this initiative at the intersection between different sectoral interests (including chemicals and steel) has made it particularly central and, as seen, subject to a very intensive effort of promotion. This is per se, a remarkable policy ambition, especially considering that hydrogen is currently not being used in steelmaking and its use as an energy source in the German economy is residual. This places the NWS as a centrepiece for the new policy of upgrading of German steelmaking and chemicals, since the market diversification towards green steel, cement and chemicals is strictly dependent on green hydrogen (BMWK, 2023a).

On the other hand, the NWS goal goes much beyond the simple upgrading of existing sectors, but it is aimed at making hydrogen a specialization niche for the German economy in the future, which could be generative of a new segment of the export sector. The task is basically to create a new sector, including an extensive infrastructure, a functioning market and a preferably domestic supply chain. Considering that the overwhelming majority of the currently produced hydrogen comes from fossil fuels, the market niche of green hydrogen stands out as a strategic market positioning (IRENA, 2024). This can be not be explained exclusively by the green transition, especially considering that the plan stresses the need to have a high domestic production of capacity, potentially creating players or clusters that may be leading in this technological field and with capacity to export technology (BMWK, 2024a). It is stated that German producers are already market leaders in hydrogen technologies and thus the development of a hydrogen economy would help the development of the sector.

As written in the NWS 2023:

“Der internationale Wasserstoffmarkthochlauf birgt zudem große Chancen für die deutsche Exportwirtschaft. Deutsche Unternehmen sind Marktführer bei Technologien, die für die Erzeugung und den Transport sowie die Nutzung und Rückverstromung von Wasserstoff benötigt werden” (BMWK, 2023a: p. 13)

The economic motive of the green hydrogen quest does not look casual especially when looking at the production capacity already available in Germany. In fact, the country was, already in 2022, second in

the world for the number of plants for the production of green hydrogen, second world exporter of hydrogen, and hydrogen was already the second most important inorganic chemical exported by the country (Statista, 2024c; 2024d; VCI, 2024b).

The strategy can thus be clearly framed as the “most vertical” of the industrial policy strategies of the government, in that it is aimed at betting on a partially established strength of the country’s productive structure in order to promote its further expansion. In addition, the introduction of more direct forms of intervention makes up a novelty, at least in contemporary German industrial policy.

5.6) The chemical industry between structural change and political disembeddedness

The NWS stands as a project of interest also for another central economic sector of the German industrial landscape, namely the chemical sector. Although chemistry performed well in the post-crisis period, the precarity of such performances emerged abruptly with the war crisis of 2022-2023. This concerned not so much the pharmaceutical sector, which continued to positively affect the overall results of the chemical-pharmaceutical duo, but rather the chemical sector as intermediate supplier for the industry.

The chemical industry has been undergoing a period of steep change of historical magnitude. At the source of such change is a series of pressures from the international competitive field that worked at the same moment and in precisely the most unfavorable directions for German chemistry. The problem can be easily summarized as one of higher price pressure, coinciding with higher input costs. This, together with weak demand, squeezed the margins of the striking majority of German chemical companies, especially the smaller ones.

As a starting point, it is fundamental to have an overview on the development of the prices of the two main types of inputs: raw materials for industrial processing and energy. With respect to raw materials for industrial processing³⁰, these were 27% higher in 2023 than they were in 2020. Considering that in the five years between 2015 and 2020 this price index had been increasing already by 31%, the rising tendency appears as even more marked (VCI, 2021a: p. 31). However, while the peak in prices for industrial raw materials was largely taken as an “external phenomenon”, not necessarily changing the competitive field, things look very differently regarding energy prices which, as previously explained, made up a very contentious topic also in the post-crisis period. What is more, energy prices, especially for natural gas, did not display the same tendency to increase over time that raw materials did. The prices of raw materials for energy increased by 81.4% in 2022, going nevertheless back to roughly their pre-war level in 2023. However, prices for energy raw materials remained, in 2023, roughly 55% higher

³⁰ A particular important role for the chemical sector is played by the prices of crude oil and naphtha, which usually make up the base for other intermediate chemical products.

than in 2020 (VCI, 2024b: p. 31). For the chemical industry specifically, energy costs increased by 77% in 2021 compared to 2020, already before the war-triggered crisis, and in contrast to an average of 27.3% for the German industry overall (VCI, 2024b: p. 80). Together with the war crisis, which led to a further increase in costs, the competitive disadvantage of the “Standort Deutschland” on energy prices started standing out as a decisive cost disadvantage. This was especially relevant for small and medium enterprises, consuming less energy but having to pay higher prices per KWh compared to the larger ones³¹. The price differential between large and small companies is considerable. For instance, in 2023, the group of the least energy-consuming companies of the chemical and pharmaceutical industries had to pay natural gas and electricity prices being 78% and 92% higher respectively compared to the largest consumers³² (VCI, 2024b: p. 31).

In the cost structure of the chemical industry, energy was reported to account for 4.8 % of the total costs in 2021. The share does not look so fundamental, but when considering the extent of the energy price increases, it is likely that energy may have accounted for a much higher share of the costs of the chemical industry in 2022-2023³³. By comparison, personal and social insurance costs made up, in 2021, 16 % of the costs, and raw materials 35.9%. Looking at the time evolution of the cost structure of the industry provides a better overview. It can be observed that, over the post-crisis period, raw materials and energy declined in relative weight in the cost structure. Conversely, the costs for personnel and social security have gradually tended to increase. This observation helps provide a perspective on the fact that, although energy prices do matter, especially for the last two years for which data is unavailable, the cost of labor also provides a heavier source of cost disadvantage.

³¹ This is due several factors connected to how the energy electricity network works, among which the better pricing power of larger companies, the lower impact that fixed energy costs for the use of the network (*Netzwerkentgelt*) have on smaller consumers.

³² The lowest consumer bracket for natural gas includes those companies that consume less than 1000 GJ of gas energy per year, while the highest includes those that consume between 1.000.000 and 4.000.000 GJ per year. For electricity, the highest bracket includes companies consuming less than 20 MWh per year, while the highest those consuming between 70.000 and 150.000 MWh per year.

³³ Data for this time period is not available at the moment of writing.

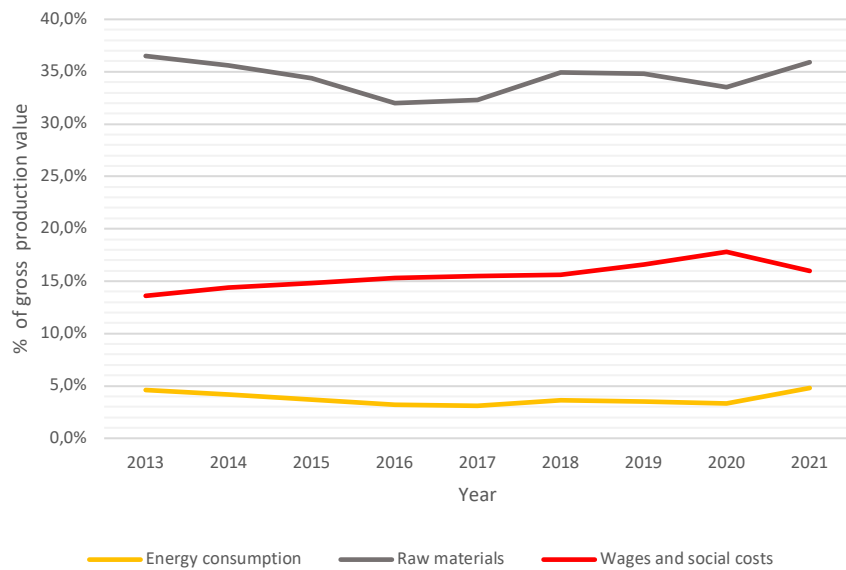


Figure 45 Cost structure of the chemical industry (% of revenues) (VCI Chemiewirtschaft in Zahlen, 2013-2024)

This is confirmed by a recent VCI survey regarding the situation of the Mittelstand, which reports the share of participating companies that reported being “heavily” or “very heavily” affected by a series of problems. Among the factors of production, personal costs affect 55% of the companies, energy prices 42% and high prices for raw materials 39% (VCI, 2024c). These numbers are remarkable, especially considering that, by 2024, energy prices had gone back to a lower level.

Furthermore, a closer scrutiny allows to observe that, although industry often attributes to high energy prices in Germany a disadvantage vis-à-vis European competitors, this is only limitedly the case. In fact, Figure 46 shows that natural gas used to be more expensive for German non-household consumers at the beginning of 2010, after when a convergence process took place. More importantly, until the second semester of 2023, the war crisis did not impact on German gas prices more than on the main European competitors and anyways less than the EU-27 average. The situation has been looking different in 2023 and 2024, when German gas prices were factually higher than the EU average and only slightly lower than in France. A similar pattern is observable for non-household electricity prices (Eurostat, 2024a). However, the prognosis does not look favorable for the future of electricity prices in Germany, since the recently planned expansion of the electricity system will probably come with higher fees from the *Netzwerkentgelte* (Handelsblatt, 2024h).

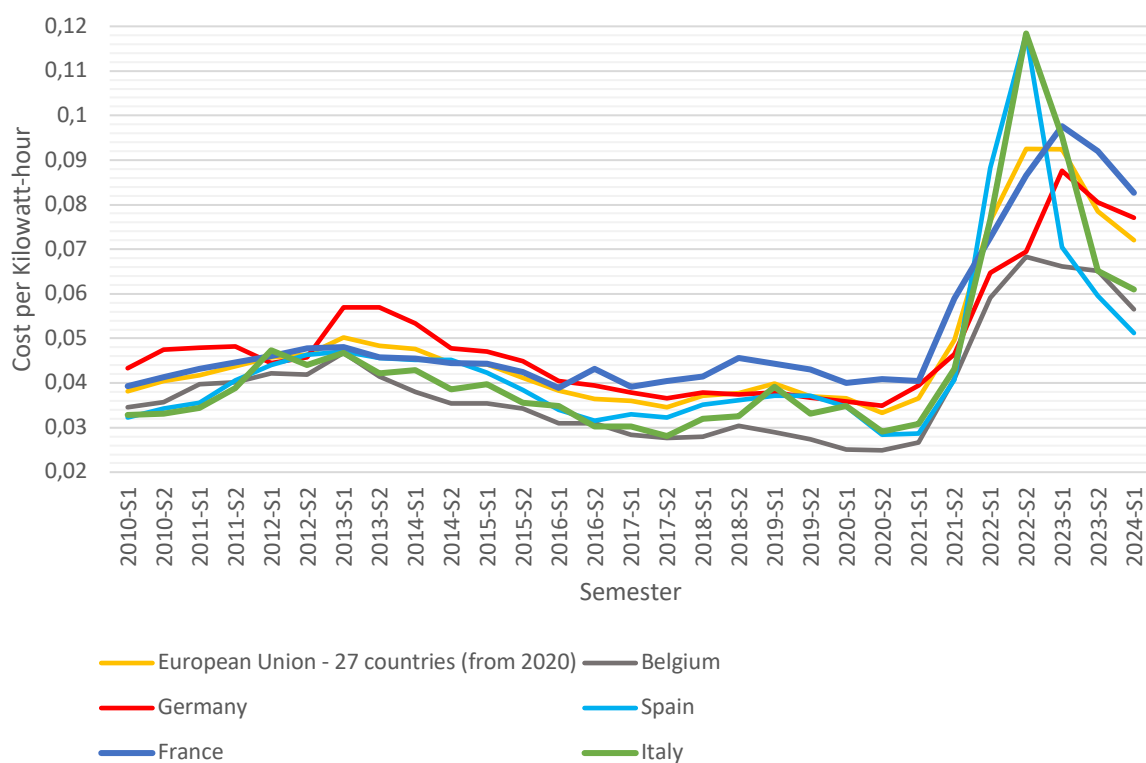


Figure 46 Gas prices for non-household consumption (incl. taxes and levies) in Germany and competing countries in the chemical industry (Eurostat, 2024b)

While the competitiveness gap in electricity prices with the European competitors is thus a relatively recent phenomenon, the gap stands as much higher with the USA and China.

Increased prices from energy and industrial raw materials were reflected in the producer price index which, by 2023, had increased by 24.4% compared to 2021 (VCI, 2024b: p. 24). By comparison, production prices increased only by 9.5% in automotive and by 16.1% in the machinery industry (VCI, 2024b: p. 28). Looking at the sub-sectors of chemistry more specifically, it can be observed that the increase was particularly steep in the field of inorganic basic chemicals (+54.2%), petrochemical derivatives (+ 21.8%) and specialized chemistry (20.1%) (VCI, 2024b: p. 24). Using an alternative classification, the increase was stronger among chemical fibers (+ 29.8%) and chemical raw materials (+ 26.8%) (VCI, 2024b: p. 25). For specific products such increases were much higher, as in the case of hydrogen (+ 74.9%) and chlorine (+ 54.8%) (VCI, 2024b: p. 26).

Distinguishing according to different sub-sectors of chemistry is relevant, since Germany carries a legacy of specialization in basic chemistry, which accounts for around 56% of the total value of

production in 2023³⁴. Basic chemistry tends nevertheless to be more price sensitive, more energy intensive, to deliver lower margins, and to be more reliant on the mass market.

The overview just given thus delivers the image of spiking production prices and a strong specialization in sectors with limited pricing power. However, higher production prices would not necessarily lead to declining or stagnating revenues if demand for these products would grow accordingly. Industry prognoses are indeed very skeptical that a recovery of the German chemical industry may be on sight, despite energy prices have gone downwards after 2022 (VCI, 2024a).

The real detrimental condition is more structural, and namely a problem of overcapacity on the supply side in the world chemical industry, especially in the field of basic chemistry. Chemical production in China was estimated to have grown 2/3 more times than the demand (Handelsblatt, 2024g). When demand for chemicals started stagnating in China, due to decelerated growth, Chinese production capacities resulted to be much higher than what the domestic market demanded. Considering that China accounted for 43.1% of the world chemical revenues in 2023, but only 12.2% of world chemical exports (VCI, 2024b; pp. 123, 129), this excess capacity was channeled into exports, which also flooded the European markets, leading to a scarce 70% utilization rate of chemical plants (Handelsblatt, 2024g). This tendency is especially valid for basic chemistry and simple mass plastics, which are often not even protected by patents. An example in this respect is the Glufosinate Ammonium produced by the German producer BASF, for which there is no patent protection and which can thus be replicated easily by other producers (Handelsblatt, 2024q).

Excess supply on the market, together with higher costs of production, thus turned out to be a lethal mix for German chemistry, which then not only had to pay more expensive inputs (including labor), but also saw a drop in the nominal revenues in a period of strong inflation. When compared to 2019, revenues were 13.6% higher in 2023, with the most intense recession being concentrated in 2023, when revenues dropped by 17.6% (VCI, 2024b: p. 36). This 13.6% increase has nevertheless likely been dragged to minus by the steep increase in production costs.

It is once more revealing to analyze the revenues of the chemical industry divided into its sub-fields (Figure 47). It can be seen that both inorganic chemistry and polymers alternated recession and stagnation all over the post-crisis period. Revenues started peaking up again after the Covid crisis, alongside the new post-Covid spurt in demand and the rising inflation of 2022. However, nominal

³⁴ This value includes “basic inorganic chemicals” (13.6%), “petrochemical and derivatives” (18.5%) and “polymers” (23.4%). Since polymers is a very heterogeneous field, standing in-between basic and applied chemistry, it is not completely accurate to label it exclusively as “basic chemistry”. It is useful to point out that 90% of German exports of polymers is accounted for by “plastics in primary form”, which is overwhelmingly considered to be basic chemistry (VCI, 2024b: p. 12; p. 86). For the sake of simplicity, and seeing no substantial reasons invalidating the observations, “basic chemistry” is meant here as those categories that are not included in the category “specialized chemistry” or in the category “detergents and body care products”.

revenues started falling again in 2023, despite higher price levels. The sector that seems to have suffered the least is specialized chemistry (-8%), while all the other categories lost between 23% and 38%. A similar pattern is replicated when we divide by products, where we can observe that the product categories to lose the most were also those with a more precarious revenue situation before the Covid crisis, namely chemical raw materials and chemical fibers.

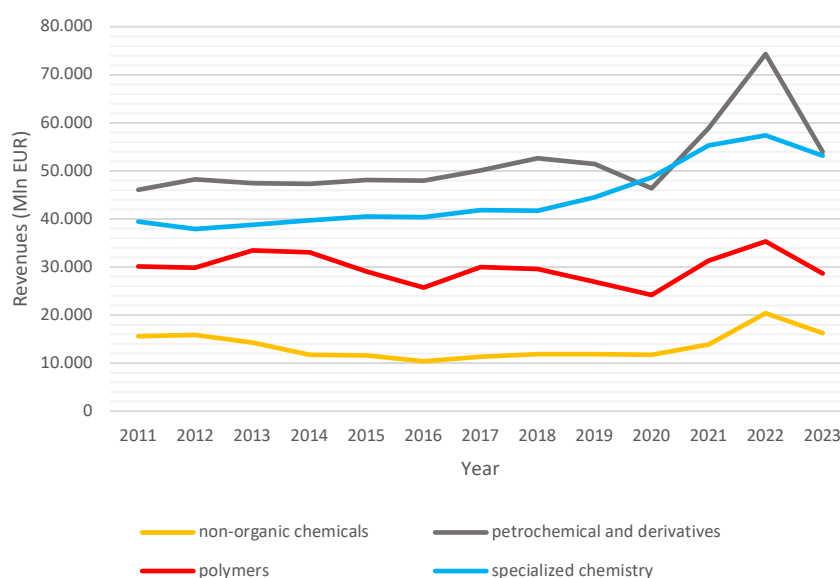


Figure 47 Revenues of the main sub-sectors of the chemical industry (mln, EUR) (VCI, 2024b)

In terms of produced volumes, quantities for the overwhelming majority of chemical products also fell more or less dramatically (VCI, 2024b: pp. 14-21). Looking comparatively at the production indices further shows how the chemical sector, even when aggregated with the better performing pharmaceutical sector, was the worst performer in the years between 2021 and 2023 (VCI, 2024b: p. 22). Moreover, the cross-national comparison of production indexes also shows Germany as the worst performer among advanced industrial countries from 2021 to 2023 (VCI, 2024b: p. 146-147)

As can be seen in Figure 48, the post-covid years also partially reversed an established trend in the industry, namely that of an increasing share of foreign revenues on the total of revenues³⁵. The chemical and pharmaceutical industries had in fact developed a strong drive to internationalization already starting from the 1990s, which made them increasingly reliant on revenues from abroad. As can be seen, this specific form of internationalization reached its peak in 2019, declining afterwards, in contrast with other sectors such as automotive and machinery, where the share even increased.

³⁵ This is different from the share of exports on total revenues, since foreign revenues makes up a broader category including revenues from products that are produced abroad and sold abroad.

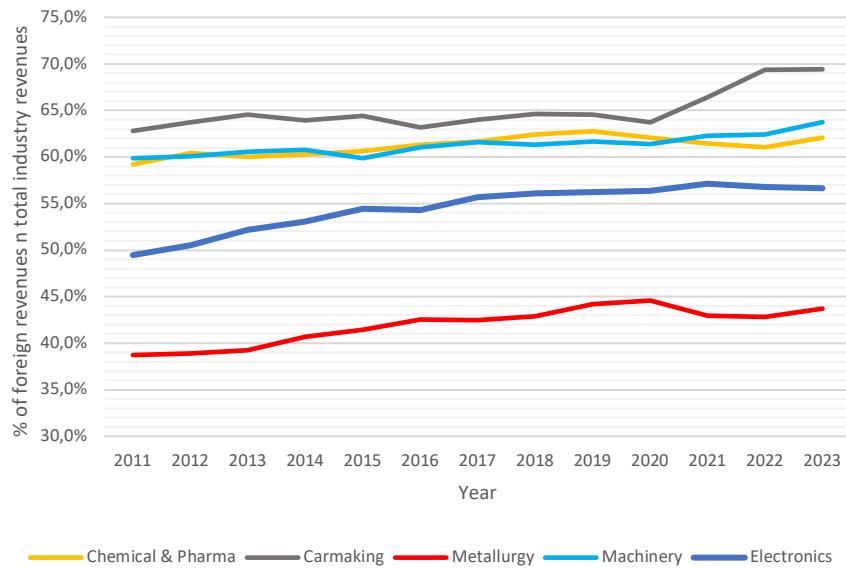


Figure 48 Shares of foreign revenues on total revenues (%) (VCI, 2024b)

Eventually, it is also worth noticing how the worsening economic situation has triggered a worsening in the indebtedness position of chemical companies, with the debt ratio (total debt / equity) increasing remarkably from 170.6 (2019) to 202.1 (2022), and the equity ratio (equity / total assets) decreasing from 37% to 33% (VCI, 2024b).

An adaptation strategy to falling revenues and sharply increasing production costs was to boost foreign investment. This matches not only the several statements in the press by industry exponents, but it is also visible in the general statistics. As can be seen from the graph, after the 2009 crisis, a tendency already was in motion, whereby foreign investment would consistently be higher than domestic investment. Nevertheless, there is a clear peaking up of foreign investment in the years 2022 and 2023, while domestic investment saw a slight decline (VCI, 2024b: p. 104) The gap between the two is, in these two years, the largest of the whole series considered. This more recent foreign investment remained for more than one third within the EU (26.6% in the Netherlands), while another one third was invested in the US, while other areas were individually more negligible. The industry has thus reacted to the alleged disadvantages of the *Standort Deutschland* by attempting to increase its internationalization, at least when it comes to investment decisions.

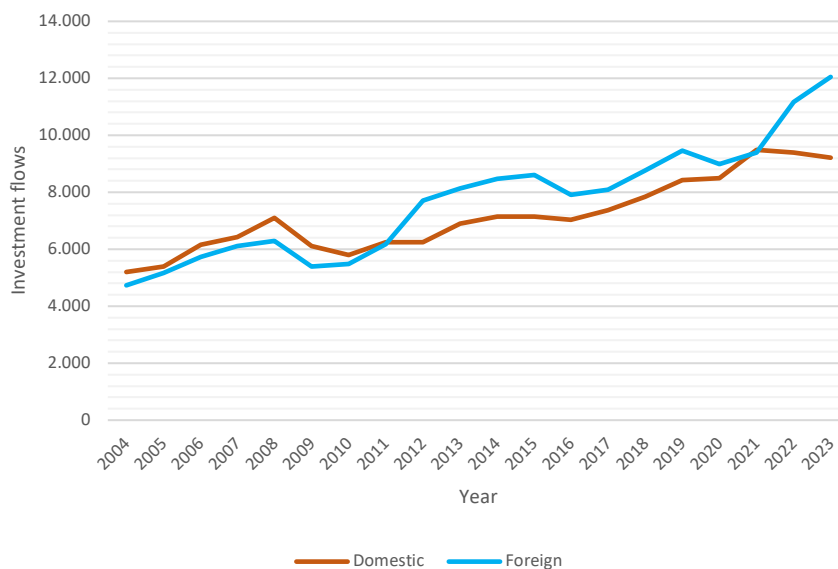


Figure 49 Investment of chemical corporations (mln, EUR) (VCI Chemiewirtschaft in Zahlen Reports, 2013-2024)

5.6.1) Running giants: chemical large corporations and the energy crisis

Therefore, the overcapacity crisis and the narrowing down of margins led to a decline of domestic investment, in favor of even higher volumes of foreign investment. Internationalization as an adaptation strategy comes particularly handy for large transnational corporations, which were also sensibly affected by the crisis, particularly in their most price-sensitive segments.

A notorious case is Covestro, which saw a 20% drop in revenues and a 30.3% drop in the EBIT in 2023, delivering negative results for the second year in a row (Covestro, 2024a). In 2024, Covestro started recovering in terms of sold volumes, but the price pressure did not allow much better revenues and EBIT results (Covestro, 2024b). The company reacted with a restructuring plan which nevertheless did not affect the German plants, arguing that they still stand out as competitive (Handelsblatt, 2024l).

The final solution found to relaunch the company, which seemed to be stuck in something more than just a short-term crisis, was an acquisition plan from the UAE-based corporation Adnoc, which promised a 400 million euros-heavy investment plan conditioned to a reduction in personnel costs (Handelsblatt, 2024c). The acquisition by a foreign player in a moment in which the *Zeitgeist* seems to push for reshoring was seen critically by the SPD and the trade unions, but welcomed by the FDP.

Similar programmes of restructuring were implemented by other large chemical corporations, such as Lanxess, and Evonik, which also started a timid recovery in 2024, although with persisting pressures on margins (Handelsblatt, 2023b; 2024n; 2024o; 2024a1).

A case which deserves particular attention is certainly BASF, the largest chemical company in the World. To give a rough idea of the structural importance of the company, BASF's revenues alone account for around 23% of the revenues of the 20 largest German companies (VCI, 2024d). The portfolio of the corporation activities is highly diversified and includes five segments of activity producing very different products such as basic and intermediate petrochemical products, fertilizers, high-value plastic for automotive parts, coatings and products for the pharmaceutical industry.

A brief look at the EBIT of the individual business segments may help provide a more fine-grained picture of the most recent crisis (Figure 50). First, the EBIT showed a tendency to decline already before the Covid and the war crises, most probably indicating that the competitive crisis was looming large for the conglomerate already before. Second, although segment data pre-2019 are difficult to compare with segment data, post-2019, the post-2019 can still give some insights regarding the most fragile business segments. It can be observed that the post-covid upswing affected particularly those segments related to manufacturing, such as chemicals and materials, consistently with the post-pandemic surge in demand. However, the war-triggered crisis led to a steep drop in the EBIT, which affected all the segments, although only marginally the agricultural solutions. Compared to 2019, where the company already reported a particularly low EBIT, the segments that suffered the most in 2023 were Nutrition and Care (-81.5%), materials (-61.1%), surface technologies (-45%) and chemicals (- 41%). The reason given for the falling EBIT were higher price pressure and lower demand in virtually all of the concerned segments. Specifically, for the segment "materials", lower demand for battery materials and vehicle catalysers are mentioned as reasons behind the weak results (BASF, 2024b). This latter aspect, stands as particularly interesting, and it also affects Covestro, which produces high-value plastics used for automotive, and predominantly for Chinese producers (Handelsblatt, 2024v).

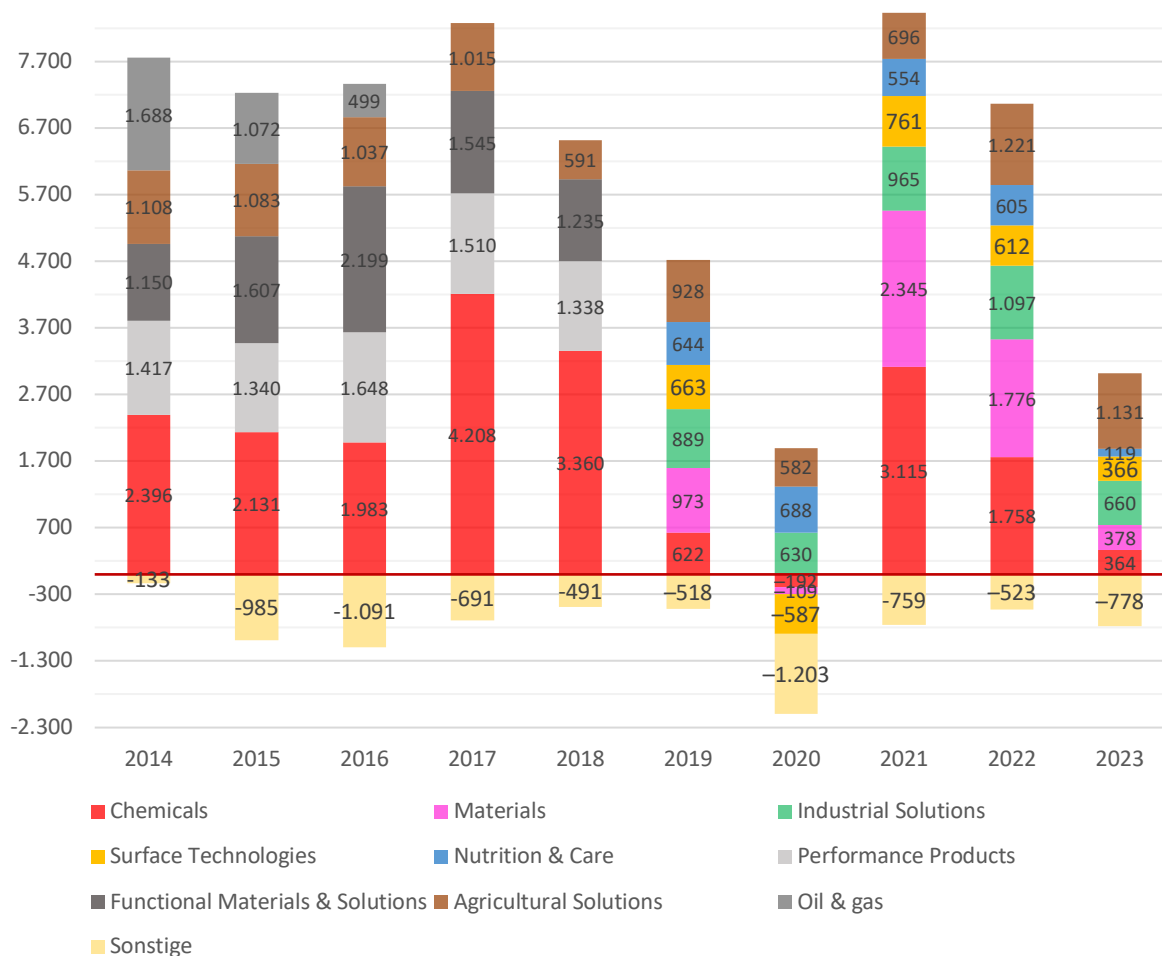


Figure 50 BASF EBIT by business segment (thousand, EUR) (BASF Yearly Reports, 2015-2024)

The results of individual segments also highlight that price pressure has started to affect also the specialized chemicals segments that were previously thought to be more “shielded”.

BASF attempted to get over the crisis primarily through a steep saving program, affecting most notoriously the energy-intensive basic chemistry, due to the more intense price competition from Chinese exports (Handelsblatt, 2024e). Conversely, a stronger reorientation towards specialized chemistry is foreseen, especially in the segment of sustainability and recycling economy. Part of this process of reconversion includes the large plant in Ludwigshafen, where 15% of the 39.000 workplaces are, at the time of writing, in danger of being cut (Handelsblatt, 2024a; 2024e). The BASF “saving plan” includes the cut of 2.600 jobs, two thirds of which in Germany (Handelsblatt, 2023c). Conversely, however, BASF expanded its global investment plan of 28.8 billion euros, 10 billion of which in China, justified by expectations of a rising Chinese and Asian chemical market, in contrast to a weak European prognosis (Handelsblatt, 2023c). The “China strategy”, however, raised objections even within the CEO board of BASF, and looks even a larger bet considering that, according to BASF itself, overcapacity has been exerting strong price pressure on the Chinese market itself (Handelsblatt, 2024e1).

The alleged reasons for disinvestment in Germany and Europe are “overregulation”, rising energy costs in Germany, especially for gas, which costed to the company 3.2 billion euros, 1.7 from the Ludwigshafen production site. The problem of high energy prices, which particularly concerns BASF, is partially addressed contemporarily to the “greening” of the company. In 2023, BASF declared it would enter another project of offshore mega park for wind energy, from which it would keep half of the generated electricity to provision its European plants (Handelsblatt, 2023a).

Part of the restructuring process is a complete upheaval of the current business segments, with a concentration on some core business and the externalization of other segments. The segments of *Batteriechemie* (battery chemistry), *Pflanzenschutz und Saatgut* (plant protection and seeds), *Coatings-Farben und Lacken* and *Katalysatoren und Edelmetalle* (catalysts and precious metals) are not considered core investment segments anymore, and they are planned to be continued especially through partnerships (Handelsblatt, 2024d). The “core business” segments of BASF will instead remain *Chemicals, Materials, Industrial solutions* and *Nutrition and care*.

It surprises especially the marginalization of investment in the “sectors of the future”, in particular catalysts and precious metals and battery chemistry. The decision to halt the battery business, where BASF undertook large investments in order to place itself in the business of electric vehicles, was motivated by the deceleration of the electric vehicles market, which made such investment remarkably riskier (Handelsblatt, 2024a; 2024p). Notoriously, the plan for opening a Lithium mine in Indonesia was halted. However, the doubts on automotive, which accounts for around 20% of BASF revenues, are a natural outcome of the decelerating conjuncture in the automotive industry, which has started to continue to negatively affects BASF results also at the time of writing (Handelsblatt, 2024e1). The passive attitude of the government regarding this disinvestment decision surprises even more considering that, as seen in the part on automotive, the government provided more than 100 million euros subsidies to BASF for projects related to electric battery technologies. Furthermore, allegedly BASF has benefitted from a further 116 million euros in direct or indirect subsidizations (Bundestag, 2024b).

Overall, the BASF example shows not only the fragility due to high specialization levels in basic chemistry, but also the fact that the competitiveness crisis is now affecting even the less price sensitive specialized chemistry. Nevertheless, expert opinions say that Germany will continue its restructuring process towards specialized chemistry and away from basic chemistry (Handelsblatt, 2024d1). It is to be seen the extent to which the innovation and specialization potential will exhaust its capacity to provide pricing power to chemical companies in an overcapacity context.

5.6.2) Beyond BASF: the chemical industry and the government

Going beyond BASF and considering the industry overall, the critical situation has led to a rising demand for a stronger industrial policy (VCI, 2021b; 2023; 2024a; 2024e), shared by several industry managers, including BASF CEO Brudermüller (Handelsblatt, 2024w).

However, it is worth stressing that the kind of industrial policy vision that is entailed in these appeals has little to do with an active state, and much more to do with a by-standing state acting as compensator for certain “Standort-related” disadvantages.

Particular stress was given, by the VCI, to what they defined a “*Brandbrief*” (open letter / urgent letter) to the government, demanding urgent reforms to stop deindustrialization (VCI, 2023). The demands put forward to the government can be grouped into two categories: compensatory measures implying a financial engagement of the state and a set of measures implying a disengagement of the state from certain fields. To the first category belong the request for a competitive “temporary electricity pricing” (*Brückenstrompreis*), the acceleration of expansion of the electricity and hydrogen network without higher costs for companies, and a “super depreciation system” (*Super Abschreibungen*) allowing to deduct a higher share of the cost of investments, in response to the US Inflation Reduction Act. The second category of measures includes the reduction of the regulatory pressure also, and especially, at the EU level, as well as the speeding up of the bureaucratic procedure.

Similar, but more extended and detailed requests were elaborated in a recent document where the VCI listed its policy prescriptions for the Bundestag 2025 elections (VCI, 2024e). The 75 pages-long document does not shy away from making bold and expensive demands. In the field of energy, the buildup of the electricity network infrastructure should be accelerated (obviously without costs for companies) and the current regime of energy prices compensation should be simplified and expanded, since it is currently not inclusive enough. Infrastructure in the field of energy, logistics, hydrogen, mobility, internet network and research should be financed and expanded. In terms of trade policy, the industry shows a free market orientation, standing against the carbon leakage regulation CBAM recently designed by the EU for being expanded to some products of the chemical sector. Research, Development and Innovation should be strongly financed through specific programs (e.g. biomass strategy, bioeconomy strategy, biotechnology fund) and through generous tax deductions that would make Germany competitive with tax deductions accorded in China and the US. In the field of tax policy, beyond the tax deduction for R&D, a reduction in corporate taxation from 30% to 25% is requested, in order to make the German tax system competitive. In the field of promotion and subsidization, an interesting demand is to change upwards the size delimitations for small and medium-sized companies, presumably in order to make larger companies also eligible for promotional programs usually dedicated to SMEs. Eventually, there is a series of requests on deregulation and speeding up of bureaucratic procedures.

Curiously, access to credit is only very briefly mentioned in terms of avoiding forms of “black listing” of energy intensive sectors from banks, despite the fact that the sector has increased its indebtedness ratio considerably and access to credit is more important now than it was before. The demands for subsidization of R&D expenses is instead consistent with a recent trend distinguishing the chemical industry from other sectors, namely a tendency to recur to external financing to finance its R&D expenses (VCI, 2024b: p. 109).

According to the document, and in contrast with an important part of industry, all of these requests are not seen as inherently contrasting with the *Schuldenbremse*.

“Die Schuldenbremse steht einem priorisierten und zukunftsorientierten Mittelausatz nicht im Wege“ (VCI, 2024e: p. 63).

According to the VCI, it is eventually all a matter of priorities. The necessary measures, it is argued, should be financed by means of redefining priorities in the public budget, as well as the institution of specific *Sondervermögen*.

To sum up, the requests of the chemical industry present some innovation but in an overall very conservative framework. The innovation side is manifested in the overt request for a policy of subsidization that goes beyond the usual “framework conditions”. Nevertheless, this remains in the context of a conservative conception of fiscal policy, in a period where other business organizations are starting to question fiscal discipline as a mantra (Interview 13).

The calls for this kind of industrial policy are not a novelty of the gas crisis period, but they have recently multiplied in number and expanded in purpose. Despite this advocacy attempt and the obvious crisis of the sector, a consistent industrial policy plan for the chemical industry is still clearly missing in Germany. This does not necessarily mean that the sector is not considered to be salient. As a matter of fact, political attention for the sector seems to be higher at this timepoint than it ever was before (Interview 11). The industry nevertheless clearly shows dissatisfaction towards government inaction.

It is possible that the very high heterogeneity of the chemical industry in terms of products and their requirements may be one of the reasons for which an industrial policy plan along the lines of the *Handlungskonzept Stahl* may be much more difficult to apply to chemistry. Nevertheless, the differences in demands between the basic chemistry and the specialized chemistry branches of the industry seems to play a non-decisive role and not be a cause of important divisions within the industry (Interview 11). The main line of division seems to be a higher saliency of the issue of energy prices for the basic chemistry segment.

However, the government is adopting some patchwork compensatory measures that are particularly targeted at energy intensive industries, and especially chemical players. An instrument that can be included in this category is the already mentioned *Klimaschutzvertrag*, through which the additional costs

of installing and running a more climate-friendly plant are basically subsidized or amortized by the state. The first round of financing of the *Klimaschutzverträge*, concluded in 2023, makes 2.8 billion euros available for 15 companies, especially from the field of chemicals, paper and glass. Of the fifteen companies, three are directly active in the chemical sector, including BASF (Handelsblatt, 2024b). The target of the second round is 130 new projects.

Considering the structural crisis of the sector, the lack of an industrial political plan remains nevertheless puzzling and can presumably be explained by industry resistance to political intervention. The local level makes up an exception in this respect. For instance, the Land NRW has outlined a *“Handlungskonzept Synthetische Kraftstoffe”* in order to promote NRW as a production location of synthetic fuels, with the stated objective to develop a new potentially profitable segment of the domestic chemical industry (MWIKE NRW, 2021).

Overall, developments in the chemical sector relate to the findings of automotive in a similar but not identical fashion. The competitive crisis goes much deeper for chemicals, specifically for the fact that Germany as a chemical location is exposed precisely in those sectors where capacity buildup abroad was more rapid and where the technological edge could be filled much earlier than, for instance, in automotive.

However, differently from what observed for the automotive industry, the crisis in chemicals did not come with a systematic industrial plan for its relaunch, despite the high occupational levels, and with the exception of some local programs like in NRW. This may be due to the high heterogeneity of the chemical industry, as well as to its more orthodox and anti-interventionist stance. Means of intervention were also very limited or close to nonexistent. This was apparently not due to a scarce political relevance of the industry for the political decisionmakers (Interview 12). It is much less clear the role that state capacity may have played in this sector.

5.7) A trembling building: the end of the “golden years” of the construction industry

„Im Baubereich gilt es, immer vorsichtig zu sein mit staatlicher Förderung. Sie muss zielgenau sein, denn Mitnahmeeffekte erhöhen nur die Preise“

(Klara Geywitz, BMWSB, interviewed by Handelsblatt (2024h1))

As seen in the previous chapter, the German construction sector experienced a period of growth that was unprecedented in the recent history. This period was also particularly profitable for the industry, whose ratio between gross operating surpluses and value added raised from 26% in 2012, to 30.9% in 2019 (Eurostat, 2024c).

After the steep rise of the post-crisis period, construction investment saw a first declining trend in 2022, dragging downwards real revenues by 5.1% (HDB, 2023). This affected all the three segments of the construction industry³⁶, but particularly public buildings, due to the fact that the public expenditure plans were not adapted to the new inflated prices. Two important causes contributed to this conjuncture. On the one hand, the war crisis triggered an increase in the prices of construction materials, which led to a strong increase in the cost of final buildings. On the other hand, the new interest rate policy led to rising interest rates and thus to a dampening of construction investment, especially considering that roughly 60% of the sector's investment is attributed to residential buildings, which tend to be more pro-cyclical.

In 2023, the decline in orders accelerated, going down to the level of 2017 (Destatis, 2024b). In 2024, the bad conjuncture persisted, although the price for construction materials started stabilizing at a higher level (HDB, 2024). In the years 2023 and 2024, the sum of higher interest rates and prices started to bite more aggressively, and the real revenues dropped by 11.5% in 2023 and they are expected to drop down by a further 12%. What is more, the efficiency standards for subsidized housing finance were made stricter beginning in 2023, while at the same time reducing the financing of new housing (HDB, 2024). At the time of writing, it seems thus that the negative conjuncture may be just at its outset.

The crisis situation made the sector increasingly vocal vis-à-vis politics. This is due to an increased dependence on public funding that, if before it was a prevailing feature of the public infrastructure segment, now it also and especially affects residential housing.

“The programs have always been important, but now they have become fundamental. We are in a situation where without this kind of support we almost cannot build”

(Interview 40)

This rising dependence is due to the pro-cyclical effect of higher interest rates and higher price levels which dampen building projects. It is interesting in this respect to observe that there is a certain pressure by the sector to circumvent the dampening effects of stricter monetary policy by using public development banks and funding programs.

This priority of the topic of state finance from the point of view of the industry does not seem to be paralleled by an equally high political attention. It is considerable to observe that, differently from what was observed for the other sectors, the construction industry seems to be particularly affected and concerned with the problem of political stability (Interviews 40, 41; HDB, 2024). One of the main problems raised is the uncertainty that the current programs of economic promotion will be continued by the next government.

It is also indicative that the programs of financial support for the construction sector, especially those for the promotion of new ecological buildings, were among the most faltering during the *Haushaltskrise*

³⁶ Namely residential buildings, economic buildings and public construction.

of end 2023, when the Scholz government needed to cut down on several projects to fill the “budget gap” (Interview 34). In this period, it was announced that the “*Förderprogramm für klimafreundlichen Neubau*” would be discontinued, since the existing plafond was exhausted (Handelsblatt, 2024f1). Although the program was eventually maintained in the new budget resulting from the January consultations, its reach has been reduced and the conditionalities attached made slightly more stringent (Handelsblatt, 2024g1).

Therefore, although financing programs were maintained, the process behind their maintenance has been a widely contested one, and one very dependent on the policy mood not only between governments, but even within the same government. Clearly, political instability makes things worse and the failure of the *Ampelkoalition* in November 2024 did not remain without rising concerns by the industry.

“Das Scheitern der Ampel-Koalition führt dazu, dass weder ein Nachtragshaushalt 2024 verabschiedet noch ein Bundeshaushalt 2025 erstellt werden kann. Die aktuellen Förderprogrammen werden zwar unter der vorläufigen Haushaltsführung fortgesetzt, neue Förderprogrammen können allerdings nicht auf den Weg gebracht werden. Somit sind Subventionen für den Neubau und die Sanierung in den kommenden Monaten erheblich begrenzt“

(HDB, 2024)

Furthermore, the industry also pointed out that the strong government focus on the buildings renovation has comparatively a much weaker effect on the construction industry, compared to measures for the financing of new buildings (HDB, 2024).

It seems to be confirmed the overall impression that the sector does not stand as a policy priority by policymakers, despite an evident crisis situation. This stands as surprising since, over the 2010s, the construction industry was supporting overall economic growth and became a structurally more influential sector.

There are some features of the construction sector, however, that partially motivated this restrained attitude when it comes to aid to the sector.

First, it should be remarked that some observers do not see the present conjuncture in the construction industry to be necessarily the beginning of a fully-fledged crisis. In fact, it is also noticed that interest rates were artificially low over the 2010s, and the present period may be rather a readjustment (Interview 39). The apocalyptic tones of the looming industrial crisis are in general not to be seen.

Second, the quotation at the beginning of this section shows that there is a certain reticence to inject liquidity in the sector for the potential inflationary effects on the price of housing, which, according to this view, would nullify the effect of promoting programs for affordable housing.

With the construction sector, I conclude the discussion on the main developments in the individual sectors. Based on these observations and the related policy responses, the next section will conclude by highlighting how the political economy of Germany is reacting to the looming crisis of its economic and industrial policy model.

5.8) Conclusion: The raise of industrial policy, the powerlessness of the state

This long narrative of German industrial policy has eventually displayed the image of a German state whose capacity and willingness to act is slower than the events unfolding.

We started this story, in the two previous chapters, showing a model that appeared to be one of relatively successful adaptation of Germany in the global world economy. The German *Standort* managed to profit from the boost in exports in the period of the introduction of the Euro currency, and from open markets, in that its companies managed to maintain a competitive and technological edge. More fundamentally, Germany maintained what Arrighi et al. (2003) would define as a spatial clustering of “profit-oriented innovations”. In this period, the German growth model, from the point of view of its productive structure, was self-driving, there was thus no real need for an active industrial policy of the traditional type. The profits from the global expansion of the German industry were still trickling down to the domestic economy, making the erosion of the Durkheimian institutions described by Streeck (2009) look just as a side effect of a relatively stable and successful system. Among the side-effects of this “age of prosperity” of the model, there was a weakening of the administrative capacity of the state and a general reinforcement of political consensus for “market-based solutions”.

By no means this is to say that there was no industrial policy at all in Germany over that time span. In particular, there were some patchwork attempts to solve the problems connected with the scarce competitiveness of the production location, namely higher factor costs. Since labor conflict had still to be avoided, energy prices became a very salient industrial policy topic of post-2009 Germany. The measures that were undertaken went especially in the direction of lowering electricity costs for the most intensive electric users, while leaving the costs relatively high for the rest. Widespread convergence with other European industrial locations took instead place in relation to gas prices. However, these forms of industrial policy were marginal fixers of a system that did not seem to need a director, a success story.

The post-2009 period came nevertheless with many changes that went relatively unnoticed, but that would determine the demise of the viability of the model in the future. The depression of the European and domestic market led companies to accelerate their internationalization plans, in order to open new growing markets. In a way, this accelerated the process of disembedding of German businesses from their own economic system. National champions, also the “hidden” ones, became much less national, and this was, and was also considered, an asset, rather than a potential liability.

Meanwhile, the German competitiveness crisis kept advancing in the post-crisis period, beginning with sectors, like steel, chemicals and shipbuilding, where the technological edge eroded earlier. With the vanishing of the technological edge, higher prices also became less justifiable. In the case of shipbuilding, the innovation-based industrial policy promoted by governments allowed charging higher prices in exchange of higher quality due to incremental innovations. This was a successful strategy for some period, but then the specter of price competition reappeared and, by now, the price differences between German and foreign producers are in the order of 20-40% which, on orders of hundreds of millions of euros, make up a remarkable cost difference (Interviews 09, 10).

The “de-clustering” of the innovative capacity from the German *Standort*, with the rise of particularly strong Chinese competitors, led to those challenges that were anticipated by Arrighi et al. (2003) regarding the accommodation of Germany in the “global hierarchy of wealth”. The internationalization process of German corporations, the related technology transfer and the attempts to build comparative advantages abroad (e.g. Manning et al., 2012) are among the factors that accelerated this change, which however would have been equally unthinkable without an active industrial policy by the recipient countries, especially China.

It is also important to stress that the nationality of the competing conglomerates is only of relative importance. The issue at hand is also that German conglomerates may not be eager anymore, independently of their market positioning, to invest where factor costs are comparatively higher. The rising cut throat price competition and the erosion of their market share at the hand of big competitors, just accelerated this decision. As a matter of fact, despite the crisis big German conglomerates such as BASF, Siemens and Volkswagen are all expanding their capacity in China (Handelsblatt, 2023c; 2024l1; 2024m1).

This crisis is another point of rupture of the constellation that allowed the interests of the German national stakeholders (the government, the scarcely mobile suppliers, and labor organizations) and the interest of German medium and large internationalized corporations to be aligned. Therefore, this is also the point when the erosion of the Durkheimian institutions started displaying its stronger effects and German corporatism turned out to be an empty box.

5.8.1) Not big enough to survive: the urge to scale up for German players

What is more, the emergence of new players and the growth of non-EU markets has led to a rising salience of the problem of size. Germany is rediscovering itself as a “small country” when related to the domestic markets of foreign competitors, especially the United States and China (Interview 04).

The problem of scaling up is perhaps the one that is the most mentioned in the interviews. This problem is multidimensional and affects the German political economy in from many angles.

First, it is reported that it is often the case that new companies are created in Europe and then either acquired by foreign players (competitors or financial) or moved by their owners abroad in order to benefit from the larger scale of other markets (Interview 04). This was reportedly the case for several solar panel companies who went to scale up in China due to the stronger subsidization policy and a larger market. It is thus not only a matter of accessing capital, but also, and perhaps most importantly, of the opportunities offered by much larger end markets. This problem does not only affect Europe, but the UK as well, which also contributed to strong activism of the state-owned British Business Bank in the technological sectors (Interview 73). For this reason, stress is often put on the need of abating the transaction costs within the European market, so that the European demand may foster the growth of domestic players.

Second, in the traditional sectors, medium sized companies in Europe have to undergo the competition of foreign players who, beyond lower factors costs of production, also enjoy a much larger market. This comes with a much higher financial firepower when it comes to mobilize capital for investment. Since even incremental innovations have become capital intensive (e.g. automation in automotive), size has become critical for the multi-billion investments that are required. The ratio behind the demands by some sectors of German business to include companies until 500 employees within the definition of SME follows precisely this logic: the medium companies of yesterday are the small companies of today. This is clearly due to the much larger scale foreign players obtain in their domestic market.

Third, as a consequence of the two factors mentioned above, scaling up has become a mechanism of defense of national assets. In a context of increasingly fluid financial markets and capital freedom, it is easy, for financially endowed foreign players, to buy domestic companies in crisis or even growing, as they start the scaling up project. This can create uncertainties in several respects.

On the one hand, private equity players may enter the capital of large or medium-sized companies, especially in crisis circumstances, implement restructuring plans based only on cutting down on costs and then re-selling them at a later point. This buy-to-resell approach clearly does not allow the company to undertake the necessary investments for its relaunching or shift to new business segments, or at least it decelerates it until a new industrial investor is found. As previously discussed, this was partially the logic of the IG Metall demanding the institution of a national fund for automotive suppliers.

On the other hand, foreign industrial players may acquire medium companies with important intangible goods (particularly customer networks and patents) in order to consolidate their position on the market. Since companies often recur to equity financing to mobilize capital for the needed investments, it is easy for competing players to take up the opportunity. When these companies are part of a broader system of innovation or are embedded in industrial networks, this may come with uncertainty from the point of

view of the purchasing sectors. The KUKA case was an example of this kind of reasoning which mobilized, albeit failing, the broader industrial system.

A factor not discussed in the interview material but that may affect the overall way of thinking of the issue of size is the idea that with size also comes higher capacity of planning, in a period in which the fractioning of the business world creates a coordination liability. In this respect, it is interesting to take back a quotation regarding the world of French planning by Shonfield, who exposes the problem perfectly:

“It is indeed obvious, (...) that the planners can only cope if the number of firms with whom they have to deal in any particular industry is fairly small (...) The weakness of planning in such industries as textiles and capital goods is in large part due to their structure; nothing would help them more, it is felt, than the demise of a lot of small businesses and the emergence of a few dominant large ones” (Shonfield, 1969: p. 137-138)

To a certain extent, therefore, the current phase of global capitalism is exerting further pressure towards that scaling up and internationalization process that promoted the fragility of political control towards economic players.

The current phase thus creates contradictory pressures. On the one hand, there is still a strong pressure to disembedding domestic capitalism and to de-nationalize national champions. On the other hand, there is this also, as seen in Streeck (2024), a Polanyian reaction of states trying to make so that benefits from the internationalization processes of national players would keep trickling down to national stakeholders. This helps make sense, for instance, of the erratic policy in automotive, whereby the usefulness of demand stimulation to promote the maintenance of employment and production levels is being increasingly questioned.

After having provided this overview on how the German case resonates with the broader premises on global capitalism from which this work started, I will in the following section dig more in-depth into how the German case relates to my initial hypotheses concerning the relationship between the macroeconomic driving sectors and political action.

5.8.2) Germany and its core sectors between path dependencies and hard limits

It is worth beginning by considering the issue of awareness, namely how policy actors set their policy priorities according to their perceptions of how the economy works.

From the interview work conducted, it appears that a certain consensus exists regarding the economic sectors of priority. From the simple point of view of awareness, automotive, steelmaking, chemicals and

machinery were all considered as the main traditional sectors of interest for the German economy. Relatedly, other new sectors of interest are ICT, robotics and semiconductors, overwhelmingly because of the influence they carry over the competitiveness of traditional sectors, especially automotive.

It is important to observe that awareness of the importance of these traditional sectors was always there and well established, and it was not developed by actors in a process. Here path dependencies, and especially the tradition of German corporatism and of informal interaction between large corporations and policymakers, may have played a role leading to the potentially captive effects that are discussed by the literature (e.g. Di Carlo et al., 2024).

However, the prominent influence seems to be related to the effects of the sectoral crisis on employment and aggregate growth. In normal times, knowledge of core sectors works more as a background condition and seldomly leads to a strategic thinking for such sectors. In these times, horizontal a-sectoral policies serve best, since they improve the profitability conditions of businesses at large.

When the economy decelerates and a relevant number of jobs is in danger, the political decision makers are forcefully dragged into the problems of the economic sectors that drive growth. Relaunching these sectors is important not only in macroeconomic perspective, but also politically, since the maintenance of employment levels makes so that large layoffs become highly salient politically. It is then that actors start thinking strategically about these sectors, they commission detailed studies (e.g. IW Consult, 2021), and they engage in tight social dialogue. An example of this is the change in attitude of the current *Ampelkoalition* towards CO₂ fleet emission limits for automotive. Reporting to the Bundestag, the government would firmly state, in 2022, to have “[s]upported the proposal of the Commission for the CO₂ fleet emission limits” (Bundestag, 2022b: p. 2). As it was previously seen, this consensus started crumbling in the moment in which the crisis of automotive turned structural, and nowadays only the Greens seem to be firmly intentioned to maintain it. Most recently, Chancellor Scholz argued that no fines should be forced upon carmakers who miss the CO₂ limits (Reuters, 2024).

This general awareness on the sectors seems to aid the cross-party consistency that has distinguished German industrial policy from other cases such, as will be seen, Italy. The interview material highlights how the political orientation of the different ministries or governments does have an influence in terms of stressing certain themes over others, but this influence does never undermine the fundamental consensus over sectors and priorities. The interviewed observers, independently of the position they held, did not perceive the change in office from Altmaier to Habeck, for instance, as a carrying discontinuity. On the opposite, as was previously exposed, the Habeck administration has expanded the project set in motion by Altmaier (Interview 18). As we will see, disagreement is more present in the means of obtaining an objective, but rarely on the objective per se.

This is also what distinguishes traditional sectors of German manufacturing from new sectors such as semiconductors and ICT. As detailed in the course of this narrative, Germany started to mobilize

substantial volumes of state finance for the new sectors only at a later point of the story, when it was clear that some form of competitive advantage in those sectors also spilled over to the traditional sectors.

The fact that Germany has relied mainly on exports as a growth driver does not seem to influence policy priorities in a mechanic and straightforward way, but rather it goes through the awareness on the core sectors. Although the importance of export appears in many of the documents, in the general perception acquired from the interviews, export is important because the core sectors grow through it, not as a policy objective per se.

An interviewee makes this point particularly clear:

“It is not something we consciously pursue; it is more of a background thought...we all know that without these exporting champions the German economy would not be what it is”

(Interview 02)

Some interviewees also discuss signals from the “real economy” regarding the lower viability of export as a future growth driver, which resonates well with the discussed competitiveness crisis:

“(...) we increasingly get the message from businesses that it will be much more difficult to keep growing on exports in the future”

(Interview 28)

Therefore, industrial policy priorities in terms of sectors were clear before and have become clearer during the crisis in the German political economy. From this does not automatically follow that action has been successfully undertaken. The chemical sector does not enjoy the same type of specific planning that automotive has enjoyed, despite the remarkable occupational consequences of the crisis of the sector. What explains these differences?

There are certainly a series of structural factors at play. First, German chemistry is focused on basic chemistry, which most observers consider already “dead” in light of the strong locational disadvantages of Germany for this kind of production (e.g. electricity prices and raw materials prices). We will see that a similar process has been unfolding in Italy.

Second, the heterogeneity of the industry may have an impact on the extent to which the state sets for itself the ambition to plan. This remains just an hypothesis so far that I did not test in this work, but that, from the material gathered seems to be at least plausible. Differently from automotive, the products of chemistry are highly heterogeneous, as the numerous pages used earlier to describe the product segments testify (e.g. paints, coatings, rubber, plastics). This does not resonate well with the need of non-expert policymakers to have easy indicators and, above all, to know which measures create the larger aggregate effect. The political platform of the chemical industry for the next elections is composed of more than 60 pages of demands encompassing very heterogeneous segments of the industry (VCI, 2024e).

Presumably for this reason, industrial policy for chemistry tends to be associated with more general and “horizontal” connected with energy prices and acceleration of approval procedures for new products.

The discussion on heterogeneity leads to another consideration, namely the ability of the state to plan and control what occurs in specific sectors. It is clear that heterogeneous sectors require a higher degree of expertise and thus a body of experts. Awareness is not sufficient if there is no capacity to intervene in a certain sector. This leads to the next hypotheses considered in this book, namely those regarding the means of state intervention. More specifically I will discriminate between two forms of state capacity, political and administrative. Both of them contribute to explain the slow innovation pace of German industrial policy.

5.8.3) Contested innovations: the confused coalitional politics of state intervention in Germany

The fact that awareness exists regarding core sectors does not mean that there will be consensus on how to obtain certain goals. This was evident, in the German case, already in 2009, when pressures started emerging for more direct forms of intervention. This seems to be a recurrent pattern in the two crisis periods that Germany has experienced. A crisis strikes, some stakeholders push for some form of innovation, but then the conservative voices tend to have the upper hand. The fundamental difference is nevertheless that Germany saw a rapid recovery from the 2009 crisis, while the current situation stands out as more structural and long-term.

It is evident that the German corporatist tradition has helped in avoiding direct confrontations between state and industry of the kind that we will see in the Italian case. However, it is equally clear that such structures have become less able to deliver outcomes being favorable to the national stakeholders. While this was a process already highlighted by previous literature (e.g. Streeck, 2009, Baccaro & Howell, 2017), it is now that it has become much clearer. It also emerges from part of the document and interview analysis that corporatism very often has become a coalition of the industry with the trade unions to look for state aid (Interview 30). German industry clearly takes issue with the “social costs” of the national system, but acts strategically avoiding industrial conflict and attempting to achieve a “subsidization of the locational disadvantage” by the state. This coalition has started to crumble in light of the last wave of layoffs that has invested many German manufacturers. Once again, the timely announcement of many layoffs in coincidence with the government crisis should be taken as a sign of the breaks in the corporatist system. In general, the governments have been engaging in bargaining, but rarely took a confrontational stance with the industry.

In opposition to my initial expectation, the higher extent of internationalization did not lead to the use of more direct and coercive instruments of control vis-à-vis the internationalized conglomerates. To be

clear, the general tendency has been of a decisive increase of the role of the state in the economy, as seen for instance with the hydrogen strategy or with the shareholdings of Hertz⁵⁰ and Lufthansa. Nevertheless, innovation has been in fits and starts and proceeded only very slowly.

This does not mean that there were no pressures in this direction. Simply, action did not consistently follow words. The explanation that I found from my empirical material points to two series of factors, some related to political capacity and some others related to the administrative capacity of the German state.

In terms of political capacity, innovators have seldomly been able to mobilize a wide policy consensus around their innovations. The National Industrial Strategy 2030 incurred into hefty critiques by several sides of the industry, especially in its most innovative proposals. In this respect, my findings considerably downscale Germann (2023) interpretation of the NIS 2030 as the result of a compromise between large companies and SMEs. In reality, what seems to have happened was mixed reception from all the sides, except for those sectors, like steelmaking, which considerably depended on state support.

Although the consensus on the need to remove the debt brake also started, over the last period, to spread across the political spectrum, the political obstacles to its reform triggered a budget crisis in 2023, which had industrial policy effect, in that it marked the death of the *Umwelthbonus* and the cancellation of several industrial projects, among which, for instance a project for E-fuels for aviation in which BASF was involved (Handelsblatt, 2024c1). The proposal of the BDI of implementing a 400 billion euros plan of investment does not seem to have accelerated the reform of the debt brake (BDI, 2024). Moreover, political consensus for the debt brake reform divides the industry itself, as previously seen with the more “cautious” stance of the chemical industry.

More generally it is worth remarking that, with the exception of shipbuilding and steel, which seem to be the sectors where the idea of more consistent industrial plans has been received more positively or overtly asked for, the conception of industrial policy of other business sectors is simply compensatory. More specifically, the emphasis is on measures such as CAPEX and OPEX which allegedly should be extended (Interview 13). In these measures, there is certainly technological conditionality, in the sense that obtaining this form of finance is conditioned to the use of a specific technology. Nevertheless, the maintenance of occupational and investment levels are supposed to be only an indirect effect.

In this respect, calls for industrial policy by the industry have to be taken with a grain of salt. The chemical industry, for instance, requests an active industrial policy, whereby “active” means basically subsidization. The state has to provide subsidies for an allegedly externally imposed green transition which, especially in the European context, comes with remarkable regulatory burdens and high speed. This kind of framing makes so that the state should pay for the disruptions in the playing field that itself has provoked. At the same time, both the chemical and automotive industries are adamant in persisting with a liberal trade policy, due to their strong dependence on the export market.

Divisions on industrial policy become heftier, the more direct the instruments of interventions proposed are, and become the strongest with the issue of shareholding.

As a general background condition, it emerges from my interview and documentary material that there is a strong general conservative bias that spans across the political spectrum. The idea remains strong that direct state ownership should be a strictly emergency measure and that “*we cannot tell the entrepreneurs how to do their jobs*” (Interview 15).

The extent of conservatism does not necessarily overlap the left-right political division. According to sources familiar with the last Merkel government, it seems correct to state that the SPD component had a slightly more interventionist tendency in cases such as Hertz50 and Lufthansa, although disagreements did not appear to be of a fundamental nature (Interview 18). It will also be briefly remarked that the proposal by Peter Altmaier to introduce a fund participated by the KfW, and aimed at temporarily hold shares in companies of strategic importance was remarkably similar to the proposal of the IG Metall in the context of the *Transformationsdialog*. The depth of the policy innovations proposed, therefore, is not necessarily driven by political positioning.

Among the national stakeholders, there is deep division regarding the extent of state interference in the economy. We saw before that the IG Metall appeared to be more eager to call for more direct forms of shareholding, while the automotive and machinery industries seemed to have consistently rejected this perspective. Industries more dependent on the internal market were also more eager to ask for intervention.

It should also be added that, even when direct intervention is proposed, this overwhelmingly takes the form of the *Stille Beteiligung* (“silent participation”), namely a form of shareholding whereby the state does not intervene in the governance of the company but only injects capital and bridges it to a new investor. The interview material I gathered does not indeed find evidence of some form of coordination between the political level and state-owned enterprises, although the evidence I gathered in this respect may still be insufficient. In this respect, my findings question the idea of Babic (2023) that some participations such as Deutsche Bahn may have been used strategically to promote national players whose success is deemed to have a positive spillover over the economic system (e.g. the case of Schenker). Analogously unprepared appears to be the German reaction to the Unicredit attempt of an hostile takeover of Commerzbank, which carries industrial policy importance in light of the role of Commerzbank in managing around 30% of German foreign trade finance, which also raised worries among the Mittelstand representatives (The Financial Times, 2024). Nevertheless, my findings on German state-owned enterprises rely so far on a too small number of interviews to provide a multifaceted description.

It should eventually be noticed that the sectors where the state has been, so far, the most active owner are those on the losing side of the economic spectrum. The entrance in Lufthansa was approved in a

moment of deep crisis, while Hertz50 was motivated by strategic reasons. At the same time, the most recent entry of the state in the equity of the largest German shipbuilder, the Meyer Werft, also points to another case of intervention in a sector that, as we have previously seen, has been on the losing side of the German economy (Die Welt, 2024c). The recent intervention in the hydrogen infrastructure sector also displays an inclination to intervene in sectors whose influence over the economy is much less established. The decision to intervene in the shipbuilding sector and not in steelmaking appears puzzling, considering that both sectors are of strategic importance. In this respect, the only explanations for this differential treatment may have to do with the more favourable future perspectives of the Meyer Werft, as well a situation of international competition with other state-owned players from France and Italy which, according to shipbuilders, created a competitive asymmetry in the market (Interview 10). Furthermore, the Thyssenkrupp case seems to have raised objections from the industrial players concerned with the sector, differently from what happened for the Meyer Werft case.

It has been reported that often even companies in crisis exert opposition to direct intervention precisely because for fear of compliance costs related to the government entrance in the governance:

“(...) they don’t want the Ministry to get into their governance, because the Ministry is a demanding shareholder. They will be requested, for example, stricter compliance rules in terms of environmental standards” (Interview 42).

These general remarks may point to the fact that being part of the system around the core sectors of the economic model may be per se a deterrent to more direct state ownership. Further evidence is nevertheless required to corroborate this point.

So far, I have discussed three factors influencing the slow proceeding of more direct forms of intervention in the German case: ideological background, political consensus and “centrality” of the sector for the economic structure. In the following sub-section, I will discuss a more fundamental reason that may carry a decisive influence, namely the weakness of the “hardware” of the German state: its administrative and planning capacity. This reason requires an ad-hoc section, in that, rather than being a competing explanation, to some extent it influences the other three factors mentioned.

5.8.4) Learning how to run when the race started: the slow capacity buildup of the German state

A central statement of this book is that the German growth model did not need, for long, a strategic element because it was mostly “self-driving”. This arrangement resonated well with the tradition of more light-handed industrial policy that had characterized the history of the German state since the 1960s (Shonfield, 1969, Zysman, 1983). What seems to appear along the lines of the documentary and

interview evidence that I gathered is that this lack of strategy also came with a pauperization of the capacity of the state to plan and intervene. Suddenly, the state is faced with ambitions for which it lacks instruments of implementation.

The fact that this type of capacity buildup required time, was masterfully explained by Shonfield:

“What is characteristic of the postwar period is that a variety of independent forces have combined to increase the available powers of control over the economic system (...). Governments have therefore been given time to learn how to intervene with increasing skill, without causing disaster in the course of educating themselves” (Shonfield, 1969: p. 64)

Shonfield made precisely the example of Germany in the 60s as undergoing a similar process of capacity building.

“In spite of ideological objections to the very notion of economic planning and the reverential official attitude towards the paly of market forces, pure and unimpeded, the German government has in practice been compelled to recognize that modern methods of short-term economic management necessarily involve long-term choices affecting the future of society” (Shonfield, 1969: p.125)

What is peculiar in the current phase is that processes in contemporary capitalism are much faster than they had ever been before, and the instruments of state control are the weakest they have ever been (Streeck, 2014). This makes this “process of learning” a luxury that a modern industrial economy cannot afford.

As a matter of fact, it is readable in the interview material how the state apparatus still displays a limited capacity to intervene in economic processes, especially due to informational asymmetries and limited availability of qualified personnel for very specific issues (Interviews 42, 03). A comparison with the banking sector is relevant. According to Scott and Quaglia (2019), the strengthening of the in-house capacity to independently evaluate banking regulation led to a strengthening of the UK government power vis-à-vis banks, by means of the reduction of information asymmetries.

“[W]e argue that when political pressures are high and regulatory institutions are strong, regulators are able to resist powerful economic interests and pursue more stringent regulation aimed at restoring financial stability (as in the case of bank capital requirements)” (Scott & Quaglia, 2019: p. 194).

Evaluating company or sectoral level industrial plans equally requires a remarkable amount of skilled personnel and of expertise. The task of managing the relatively few shareholdings that the German government took since Covid was described as a demanding task which, if is to be extended, would require a much heavier administrative-managerial machine (Interview 42). In this respect, it is unsurprising that the government machine avoids to pose for itself the ambition of undertaking a more dirigiste role. At the same time, as seen in the example brought by Scott and Quaglia (2019), this lack of expertise makes so that the state does not discuss with the industry on an equal footing.

The relative failure of state interventions in the field of battery production are particularly relevant in this respect. Beyond the already mentioned failures with Northvolt and Blackstone Technology, a side-remark is also worth to be done on BASF. The disinvestment of BASF in the field of batteries, due to the financial struggle of the company, passed as a side-news. However, it is particularly indicative of the fact that the government is not managing to orchestrate a consistent policy program involving national players and guiding their investment decisions in pursuing long-term goals.

It is also nevertheless recognized that, over the last years, the roles and influence of the Ministry of the Economy has been expanded in light of the rising prominence of industrial policy issues (Interview 42). This points to the fact that, albeit slowly, a process of adaptation is ongoing.

This lack of means of the state has made institutions like the KfW much more important currently than they had been in the past. In fact, the strong integration of the KfW in the financial system provides the state ministerial bureaucracy with an indispensable know-how regarding how to implement the broader plans that are elaborated at the ministerial level (Interview 03).

“I am a big fan of the KfW, you pose them a problem and they bring you a solution”

(Interview 3)

It stands as clear that the type of expertise available to the KfW makes it not just a public bank, but rather an integral pillar of the capacity to intervene of the state machine.

This provides the KfW management with leverage over the decisions not so much of the goals of the state finance it mobilizes, but rather regarding the methods for its implementation. The most telling example in this respect is the creation of KfW Capital which, despite being resisted by the bank management, it went eventually through, although in the more “modest” form of a fund investing in funds, rather than directly in companies (Interview 18). It is pointed out by an interviewee that the political decision makers “[w]ere not interested in the details regarding how this would have been done. They [the KfW, edit] found this way and we agreed to that” (Interview 18).

The role of capacity-enhancer is also highlighted when discussing that the role the KfW had in disbursing the pandemic-related programs (Interviews 18, 03, 34).

A second reason for which the KfW is a central pillar of the new forms of industrial policy is that it allows to promote new programs without impacts for the public budget. For this reason, the industrial policy role of the KfW is envisioned to grow in extension and importance in the future (Interviews 34, 38). For some programs, resources from the public budget are not made available, and therefore alternative forms of financing are needed (Interview 34).

Therefore, the KfW has been gradually converted to target further industrial policy goals beyond the previous activity in the field of renewable energy. An example of the speed to which this change is

happening is that, when I started the interview fieldwork for the German case, the KfW was still not playing a role in the field of raw materials, although this was envisioned for the future (Interview 38). In mid-2024, the KfW introduced its first “*German Raw Materials Fund*”, whereby it aims to invest 1 billion euro in equity of companies active in mining, processing and recycling (KfW, 2024a).

The matter of the expansion of the competences and influence of the KfW in light of its privileged expertise position poses the question as to the limits of the agency of the bank management. The interview material gathered highlights how the decisions taken regarding KfW programs unite a wide array of actors that coordinate mostly informally.

It is worth reminding that the KfW governance is made up of a *Verwaltungsrat* and a *Vorstand*. The *Verwaltungsrat* is the expression of the German corporatist system, collecting a very large number of representatives from the financial sector, industry, SMEs, trade unions and other stakeholders. Instead, the *Vorstand* is the board of administrators and takes the operational decisions. The *Verwaltungsrat* has a role of surveillance making so that the KfW complies with its general purpose and also discusses the introduction of specific programs and, for the larger loans, of individual loans. It is interesting to notice that there is an almost unanimous assessment of the *Verwaltungsrat* as being far from a decisive body for the final decisions that are taken (Interviews 27, 25, 26, 18). The advantage of being in the *Verwaltungsrat* are mostly associated with the information advantage it provides over the bank activity, and, above all, with the opportunities to network between participants and thus discuss programs also more informally (Interview 24). The general view is that the most important decisions are already taken elsewhere, namely with in the venues of direct bargaining between the ministries and the interest associations concerned. However, the last word seems to be the eventually that of the main shareholder, namely the federal government.

The composition of the *Vorstand*, is also a field of political bargaining and contention between the parties forming a coalition government (Interview 18). Although it is recognized that there are heads of the *Vorstand* that can take more or less initiative, according to the individual style and personality, it seems to be established that nobody would expect the head of the *Vorstand* to act like “a politician” and oppose the government (Interview 34). As we will see, this distinguishes the KfW from what we will see for the Italian CDP, where instead contrasts between government and management became evident and had public resonance.

To be sure, there are points of friction between the will of the policymakers for the bank to take on more risk and the strictly prudent orientation of the bank (Interview 35). In particular, contrasts may rise regarding the amount of state guarantees the bank should receive in case of specific programs or loans. However, the relationship between government and management seems to be overwhelmingly smooth, presumably also because the appointed managers tend to be trusted by the politicians pushing for their appointment (Interviews 18, 24). This may partially avoid that the information asymmetry between the

management and the politicians does not come with an excessive discretionary power of the former at the expenses of the latter.

As a final remark, it should be pointed out that, although playing a central role for the development of capacity of the German state, the KfW displays fragilities when it comes to its role as an industrial policy instrument. In particular, the risk aversion bias of the bank management, which is scarcely compensated by a corresponding ministerial capacity, creates limitations on the kinds of programs the bank is eager to engage with (Interviews 24, 25). Such reticence is usually overcome through state guarantees, although this also makes wonder the extent to which a banking institution is then a fitting instrument for policy projects that require a relatively high amount of risk.

This section on the administrative capacity of the German state is thus aimed at highlighting another factor limiting more direct forms of intervention. The state is not yet equipped to be in the position to be a “vertical planner” and to bargain on an equal footing with corporations.

How did the German growth model influence the actual intervention capacity of the German state?

First of all, the fact that the model could proceed relatively undisturbed for two decades consolidated the idea that such administrative capacity was not needed and that it would even be detrimental. This has led to a deterioration of the already scarce planning skills inherited from the Fordist period.

Second, the internationalization connected with the export orientation of the German economy has created players that have become much more difficult to keep under control due to their sheer size and extensive internationalization, raising the bar for the necessary state capacity. Even only monitoring large and extended supply chains is an incredibly difficult task for the government and data is not always available (Interviews 04, 31). The diminished relevance of the German market for the domestic carmakers further takes away the “carrot” of subsidization of demand as a counter-weight for keeping domestic employment and production levels.

Therefore, rapidly moving corporations and investment decisions are not compensated by an equally rapid buildup of state capacity to manage the current transition.

In the next three chapters, we will see how the lack of established and consistent core sectors and of an established growth model has influenced the decisions of Italian policymakers in industrial policy. In contrast to the German case, Italy inherited from the Fordist period more advanced instruments of state intervention, which nevertheless struggled to use in a targeted manner. Such “instruments”, however, especially state-owned enterprises, increasingly developed a strategic capacity of their own, which turned into an increasingly stratified Italian field of industrial policy.

We will also see the striking commonality of the two cases when it comes to the accelerating process of disembedding pursued by domestic international corporations. In the Italian case, however, state ownership will turn out to be a powerful instrument of “forced embedding”.

CHAPTER VI

Burning bridges without a plan

The sidelining of industrial policy in Italy

The Italian approach to industrial policy was historically shaped by three factors. First, the condition of latecomer in the industrialized world made so that the laissez-faire policy style of industrialization would be less pursuable. Second, the centralized institutional design of the Italian state, which remarkably mirrored the French one, made so that considerable powers would be attributed to the central government. Third, reading it from the point of view of Gerschenkron, the scarcity of domestic capital made so that the state would step in to play an important role in mobilizing finance, leading subsequently to a financial system that Zysman (1983) would define as very close to the French one.

In particular, the earliest period of industrial policy of the Italian unitary state was featured by a shift from a conservative trade-liberal paradigm promoted by the ruling elite of landowners, to a protectionist phase, coinciding with the economic crisis of 1873-1896 (Fortis & Carminati, 2016).

The early industrialization process was above all promoted and accelerated by the need of the Italian state to build a modern army. It was indeed through public procurement that the Italian shipbuilding and metallurgy industries managed to create the first large companies such as Ansaldo. Although large companies in Italy in this period were mostly subsidiaries of foreign companies, new Italian powerful international players started emerging in the export sector, including rubber and automotive (Onida et al., 2013), but also steelmaking.

Italian state-backed developmental finance started developing, similarly to the French case, relatively early in history. This story begins in 1863, with the creation of the Cassa Depositi e Prestiti (CDP), which immediately started a process of expansion which lasted until the beginning of the First World War. By then, the bank had been tasked with a variety of functions, including stabilization of the bond market, infrastructure financing and funding to local municipalities (Della Torre, 2014). Most importantly, governments tried to use the bank in order to have a base of domestic savings from postal bank accounts to promote the Italian industrialization process, which was considered to be too reliant on foreign capital (Bricco, 2020). The expansion of the bank continued to an extent that led it to hold 40% of the total banking system assets by the beginning of the First World War (De Cecco & Toniolo, 2014)

The two World Wars and the Great Depression marked the transformation of the Italian state into an entrepreneurial state “against its will”. In fact, this process was largely an unintended consequence of the Great Depression, when the largest mixed banks were nationalized, and with them the shares they held in the strategic industrial companies. Since Italy lacked, both during the Fascist and in the post-war

period, of a market large enough to absorb the size of that industrial complex, policymakers opted for maintaining these companies under state ownership and to make them a central part of the developmental policy also after the Second World War. The constellation of Italian SOEs and public banks became thus extremely articulated.

On the industrial side, the main industrial SOEs were grouped under the *Istituto per la Ricostruzione Industriale* (IRI). This was a highly diversified industrial conglomerate that had gradually expanded at least until the 1980s, when the process of liberalization and privatization ensued (Ravazzi, 2014). The array of the group's activities was so wide that, by 1982, it was present in steelmaking, telecommunications, automotive, shipbuilding, maritime transportation, airlines, construction materials, chemicals, industrial machines, metalworking, optics, informatics, microelectronics, aircraft industry, foodstuffs, financials, research, cultural and entertainment services and tourism (Pellegrini, 2015).

This steep expansion was the effect of a developmental plan of the conglomerate, with the four objectives to improve occupational levels, support national champions' competitiveness, promote industrial upgrading in core sectors and attempt to develop weaker sectors. Shonfield (1969) considered this expansion as mostly coming endogenously from the group and a class of "developmentalist" public managers, rather than to the Italian governments.

This system of industrial state-owned enterprises was accompanied by an equally vast system of financial state-owned institutions. The IRI group held stakes in several "banks of national interest": the Banca Commerciale Italiana, Credito Italiano and Banco di Roma, which nevertheless worked in all respects as commercial banks and were scarcely used for industrial policy purposes (Conte & Piluso, 2013).

The *Istituto Mobiliare Italiano* (IMI) was a state-owned financial institution tasked with providing long-term credit for industrial development. This institution was the main financial pillar of Italian industrial policy in this period, and played a crucial role in providing long-term funding to strategic sectors for investment in fixed assets (Lombardo & Zamagni, 2009). Differently from CDP, the bank mainly financed its operations by issuing sovereign-backed bonds on the market. Analyzing IMI's activity can thus tell a good part of the story of government priorities in terms of sectoral development. Two data series are particularly interesting: the composition by sectors (Figure 51) and the percentage of export credit on the yearly activities (Figure 52).

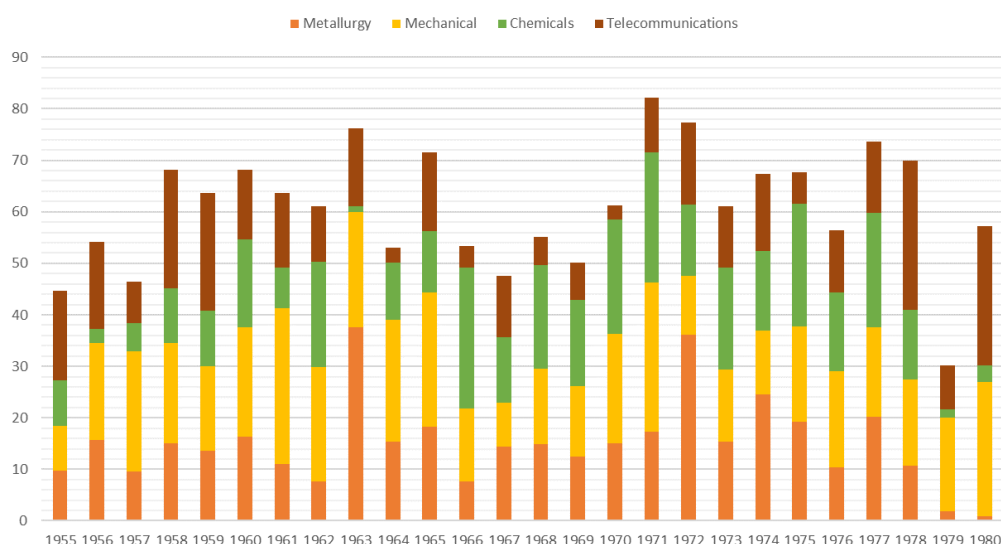


Figure 51 share of the main sectors financed by IMI, 1955-1980 (% total activities) (own calculations based on: Lombardo & Zamagni, 2009).

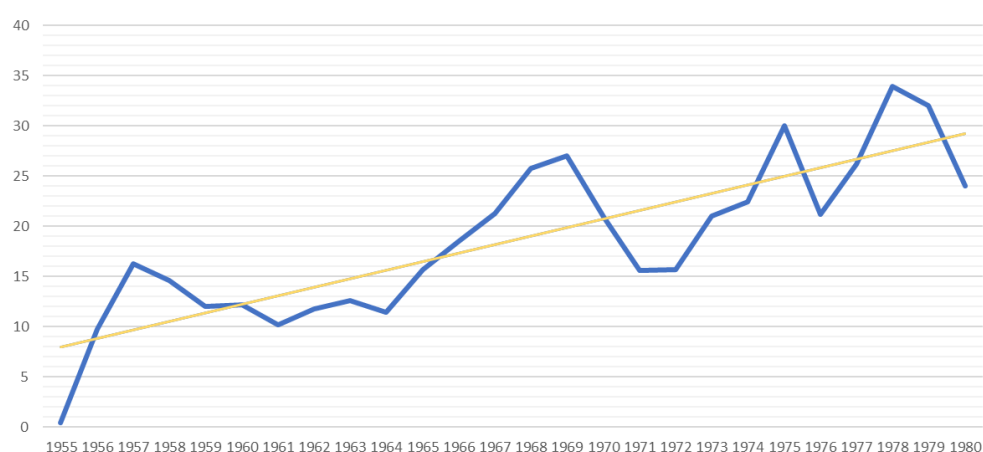


Figure 52 IMI export credit activity, 1955-1980 (% of yearly operations) (own calculations based on: Lombardo & Zamagni, 2009).

In terms of sectors, it is noticeable that the four main sectors of activity always accounted for a varying percentage between 45% and 82% of the yearly lending activity. Except for telecommunications, they are also the most export-oriented sectors of the Italian economy in that period. For instance, the share of export on the total value-added in the metallurgy industry increased from 11.6% in 1952 to 42.8% in 1971, from 20.2% to 52.7% in the mechanical industry and from 24.3% to 40.7% in the chemicals (Gomellini, 2004). Export-credit activity seems to confirm this tendency, with a tendential increase over the time series, reaching a peak of roughly 33% of total IMI's activities in 1978.

Moreover, the largest sectors of activity of the IRI group were mostly connected with intermediate products of the export sector (e.g. steelmaking). It appears, in fact, that state ownership in steelmaking and intermediate materials sectors was part of a targeted intervention aimed at providing the export-oriented Italian industry, especially automotive, with cheap inputs (Bianchi, 2002). Research has shown also that Italian SOEs were very central in the Italian corporate network until the late 1970s, and, more importantly, tended to build formal connections with private sector enterprises (Rinaldi & Vasta, 2012). What is more, IRI companies themselves made up a non-negligible share of the export sector, and a large share of the overall IRI production was exported. Between 1950 and 1973, the share of export on the overall IRI manufacturing production fluctuated between 14.4 and 22.9%.

Therefore, the IRI industrial strategy pushed the development of a competitive export sector, presumably also to compensate for rising imports due to rising wages. According to De Vivo and Pivetti (1980), this concern with rising imports was well alive in Italian policymaking of the period, especially due to the fact that Italy was strongly dependent on imports for food products. The authors defined Italian demand management since the 1960s as a “restrained growth strategy” marked by exports rising at a much faster pace than domestic demand and constant balance of payment surpluses until 1972. Subsequently, between 1973 and 1978, domestic demand grew by 1% per year, while exports grew by 8.8% a year.

Therefore, despite the dominant role of internal demand, the strategy of development pursued through state agencies seemed to be, for a long time, focused on promoting an export-oriented manufacturing. The fascinating aspect is that whether this strategy was promoted by the government, or simply facilitated, is still highly unclear.

According to Simoni (2019) this vast system of SOEs constituted a fundamental base for the Italian economy, which allowed the country to have a functional equivalent of complex institutional settings based on voluntarism which existed for instance in corporatist countries. However, the steep privatizations of the 1980s and especially the 1990s led to the demise of this formidable industrial machine.

6.1) The privatizations and the transformation of Italian state finance: a contested field

The forms in which Italian industrial policy and development banking have been structured are strongly shaped by the privatization and restructuring process of Italian SOEs that took place in the 1990s, as a consequence of a mix of national political developments and an overarching global tendency to privatize state-owned enterprises and financial institutions. Moreover, the process of European Integration and the related requirement to reduce public debt further contributed to give some features of urgency to this process, since Italy struggled to fit the parameters established in the Maastricht Treaty.

This sweeping process of privatization of an enormous amount of state assets was implemented in a period of big political instability and mostly driven by a stratum of technocrats having in mind a clear project of tiding the hands of the Italian state in favor of a supranational polity that would compel the country to a new neoliberal course (Dyson & Featherstone, 1996; Curli, 2014). Most of the state-owned industrial and financial companies were therefore first downsized then privatized. By 2002, the IRI conglomerate of state-owned enterprises, previously symbol of the Italian entrepreneurial state, had ceased to exist. Nevertheless, the state maintained relevant controlling shares and veto powers in many of its previously owned enterprises, especially in electricity, utilities, shipbuilding, mechanical, aerospace and microelectronics industries.

The whole system based on the employment of state-owned financial institutions in order to direct credit priorities, very similar to what Zysman (1983) identified as a feature of the French case, was thus dismantled. After the privatization of the enormous state-banking sector, the only player that remained in public hands was also its oldest one, namely the Cassa Depositi e Prestiti (CDP). Perhaps due to its historical role in infrastructure financing, CDP was spared from the privatization wave of the 90s, although part of the technocratic elite did attempt to privatize it (Salvemini, 2014: p. 262). The privatization waves thus left CDP as the only large national public bank of the country and a potentially effective tool for pursuing industrial policy by financialized means.

Moreover, three smaller specialized financial institutions were crafted or reformed in the 90s. The oldest among these is SACE (*Sezione Speciale per l'Assicurazione del Credito all'Esportazione*, later *Istituto per i Servizi Assicurativi del Commercio Estero*), namely the Italian export-credit agency, whose role is nevertheless not export direct lending but rather the concession of guarantees for exports. For supporting the internationalization projects of the company, also through equity investments, in 1990 the government decided to establish SIMEST (*Società Italiana per le Imprese Miste all'Estero*). Eventually, in 1999 a series of former state financial institution were merged in order to form Invitalia, an agency with the goal of supporting economic development in the South and promote foreign direct investment.

As will become clear over the narration, an overarching problem of Italian industrial policy is the debate on how these state financial institutions inherited from the past should be employed.

This is expressed in a conflict cleavage between that part of the establishment that saw state financial institutions as an instrument for a post-statist “developmentalist” industrial policy, and those who saw them as a mere instrument meant to address market failures only. Simply stated: the fact per se to employ state-backed finance for industrial policy is more divisive issue than an accepted and for-granted fact.

With “developmentalists” I define here those members of the political establishment who tried to endow the bank with the instruments that would allow it to pursue objectives that would go beyond immediate profitability or the limitation to a role of fixer of market flaws. In this respect, developmentalists go

closer to the idea of old-style industrial policy, whereby the state does not only facilitate the market by enhancing the credit supply, but also tries to intervene to shape outcomes that the market would not guarantee otherwise. A “developmentalist” attitude would go closer to what is often referred to as “entrepreneurial state” (Mazzucato, 2015) and, in the Italian context, has an easy historical reference point in the IRI. Centrally, developmentalists consider the state as an actor that can employ its resources and expertise to support business in sectors considered as central to national economic development. This implies thus both an “optimistic” view on the capacity of the state to act as an “entrepreneur” and, consequently, an expansion of the range of instruments available for the state to do so.

On the opposite side, the “market-liberal” faction of the political establishment considers the bank as slightly more than an instrument that has to be resorted to only in case of market failures, namely when the private financial market does not provide certain “products”. For instance, banks may not be able or willing to offer loans with a maturity longer than 15 years, although businesses may need them for long-term investment projects. In this case, the state is not trying to shape market outcomes or to create strong players in certain sectors, but rather to “oil” the wheels of financial markets so that competitive companies can obtain access to the finance needed to remain competitive. In this logic we can easily frame, for instance, the use of public banks as a market-opener for venture capital.

Looking at the recent history of state finance, the clearest pattern is the tendency for political governments to be, on average, more developmentalists, and for technocratic governments to be clearly more market-liberal.

This has also to do both with ideational factors and with different sensitivities to the issue of public debt. Ideationally, technocratic governments also tended to overlap with a very sceptical stance towards the capacity of state-directed industrial policy to shape industrial outcomes. From the point of view of public debt, technocratic governments feared that CDP could become a further source of potential debt burden.

Nevertheless, the alternation to different conceptions of industrial policy at the government over time has favoured the layering of new instruments and competences for state financial institutions over the old ones, although this multiplication of instruments and expansion of competences did not follow a consistent project.

Overall, it can thus be appreciated how Italian state finance makes a particularly evident case for what Marois (2022) defined as public banks as “contested institutions”. The functions of Italian public banking are continuously redefined and reinterpreted by the actors participating in its design, in a process that is still open to these days.

I drew this distinction between developmentalists and market-liberals in state finance inductively, in the process of discovering and researching. I deemed appropriate to anticipate this finding, since it allows

to better frame and interpret the overall findings on Italy, thereby accompanying the reader over the chapters. In the next section, we will see how the process of re-finding a function for Italian state finance was paralleled by a looming competitiveness crisis.

6.2) The slow but steep erosion of the Italian industrial system

Italy entered the beginning of the new millennium fresh of an overwhelming transformation of its political and economic landscape. Politically, the 1990s corruption scandals wiped out the old political establishment especially at the centre-right side of the political spectrum, while the Left was in the middle of a process of adjustment due to the fragmentation that followed demise of the Italian Communist Party (PCI). Moreover, the old establishment of the Christian-democratic centre was replaced by new political movements, Forza Italia and the Lega Nord, that deeply challenged the existing political and economic arrangements, in particular the centralized nature of the state and the more interventionist style of economic governance.

Across the political spectrum, there was nevertheless consensus on the perceived need to put in motion a process of privatization of the system of industrial and financial state-owned enterprises that was inherited from the Post-WWII developmental model. The entrepreneurial state had to be sacrificed to reduce public debt and comply with the Maastricht criteria. Therefore, the 1990s were featured by one of the steepest privatization processes in the World, only second to Japan (MEF, 2006), and whose first wave concluded with the final dissolution of the IRI in 2000.

Meanwhile, the general economic outlook was shaky, in that the country started the 2000s with an already widely acknowledged competitiveness crisis, with loss of shares on the global market across traditional sectors (MISE, 2007). Such competitiveness crisis would be, for the time being, a consistent narrative and dilemma in the Italian industrial and economic policy debate. Much of the debate in the 2000s was centred on the issue of the allegedly “rigid” system of labour legislation. This aspect would be at the centre of the labour policy debate at least until the Jobs Act of 2014, and would result eventually in a gradual process of “conversion” of the old labour market institutional arrangements to serve new purposes more functional to employers (Baccaro & Howell, 2017). A broader discussion of this aspect is beyond the scope of this work, although it worth pointing out that labour legislation was never proven to be a determining factor in Italian economic decline, since the crisis was much more structural and related to the reliance on traditional sectors (MISE, 2007).

Although not nearly with the dramatic tones it would acquire later, the crisis was already visible in the 2000s from several indicators. To begin with, both the trade balance and the current account balance

saw a process of deterioration all over the 2000s (Figure 53). Considering the trade balance in goods estimated through the OECD Bi-lateral trade tables (Figure 54), the worsening outlook appears even sharper.

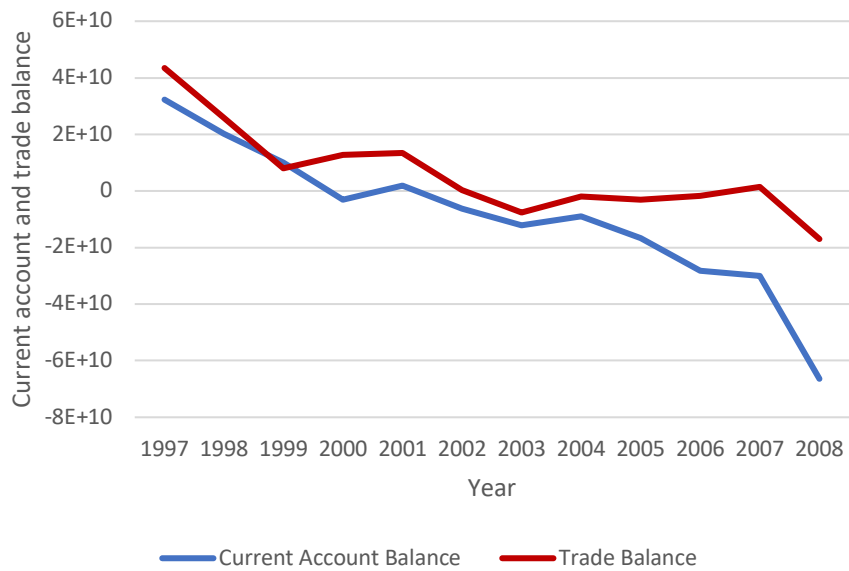


Figure 53 Current account and trade balance (current USD) (World Bank, 2024c; 2024d)

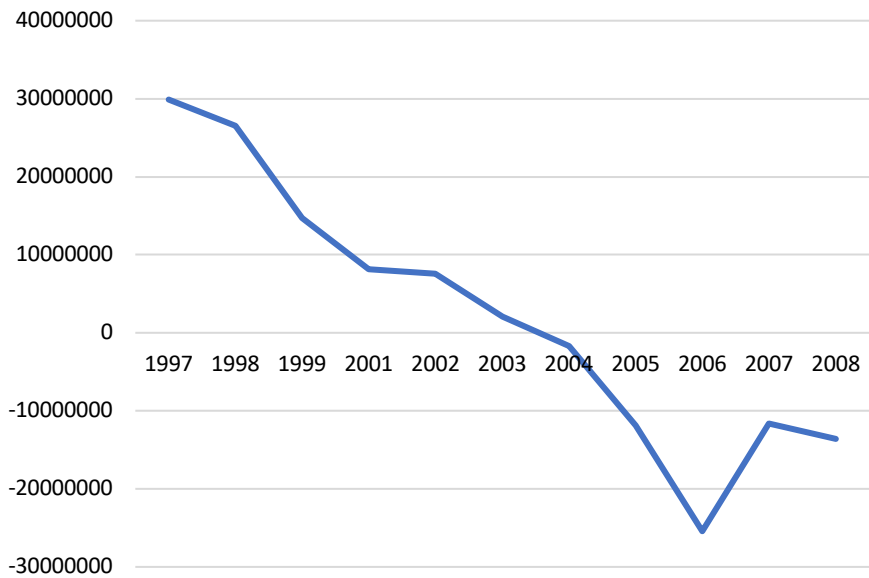


Figure 54 Manufacturing trade balance (mln, EUR) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

Furthermore, Figure 55 and 56 display how the share of Italian exports on the total of global and European exports started declining steadily in this period.

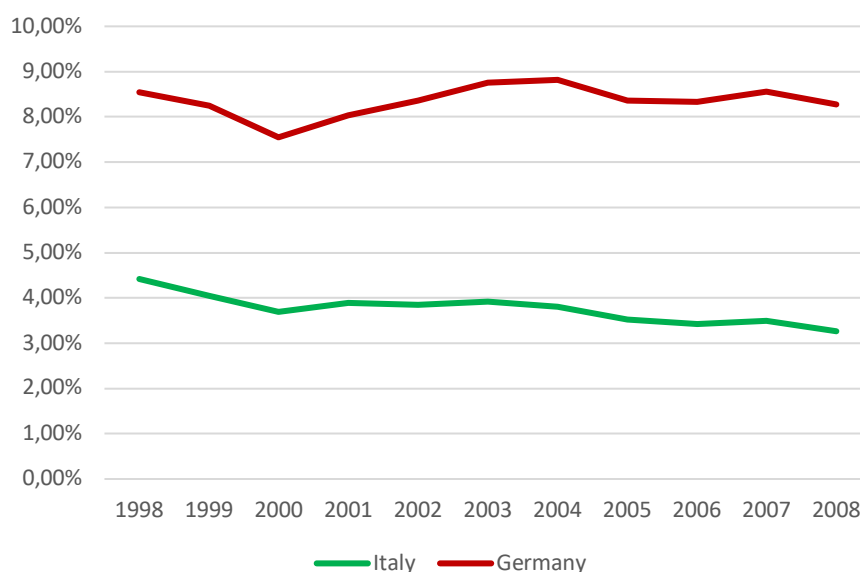


Figure 55 Share of Italian and German exports (% total world exports) (own calculations based on: World Bank, 2024e)

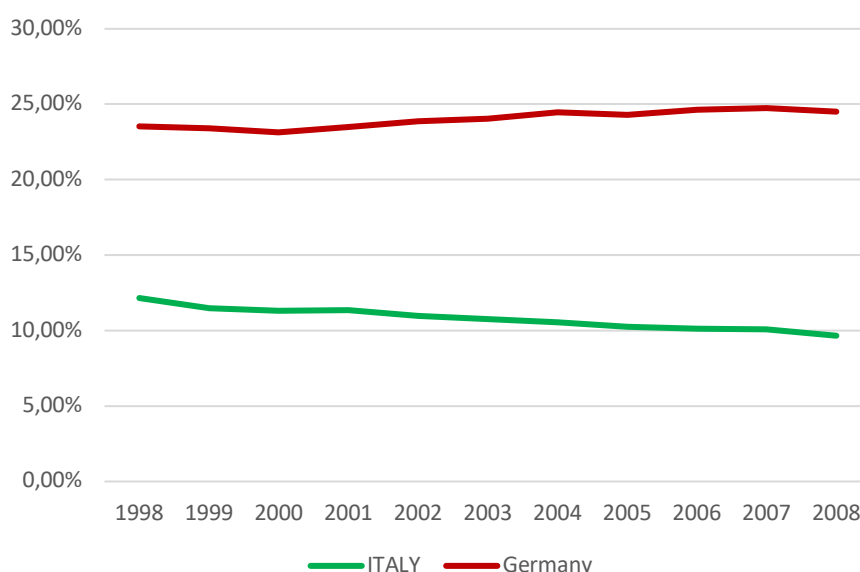


Figure 56 Share of the Italian and German exports on total European export (% European exports) (own calculations based on: World Bank, 2024e)

When looking at the trade balance for selected sectors, the situation looks more articulated and stratified. Chemicals, Steel and automotive, three important traditional sectors in Italian economic development, all displayed a negative trade balance, with only chemicals experiencing a slight improvement towards the end of the period. Conversely, shipbuilding and textiles and apparels displayed a positive and even improving trade balance over the analysed period. This is particularly interesting, since textiles and

apparels were among the traditional sectors of Italian manufacturing that were considered to be in crisis. This nonetheless, such crisis is not immediately visible in the trade balance.

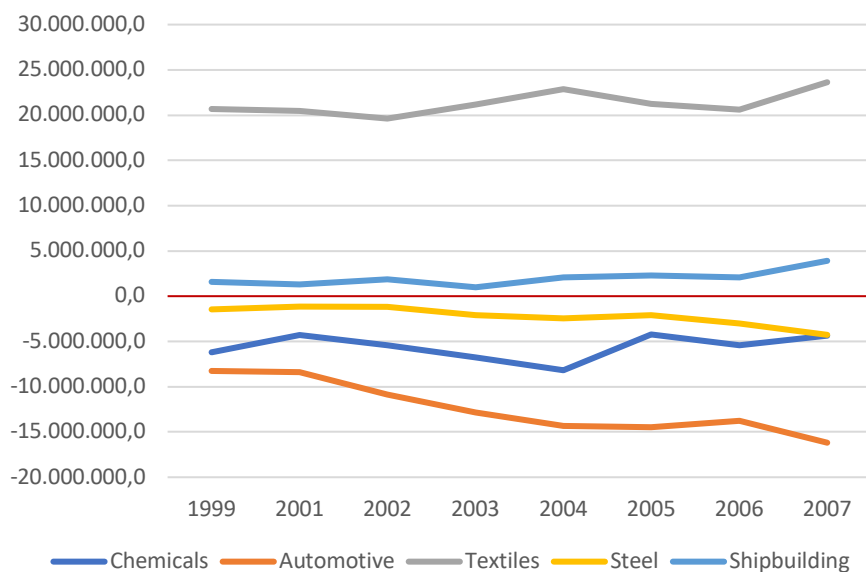


Figure 57 Trade balance by sector (mln, EUR) (own calculations based on: OECD, 2024a)

Considering the gross value added provides some more crispiness to the picture. As can be seen in Figure 58, the value added developed either stagnantly or negatively for all the considered sectors, with the exception of metallurgy, which can possibly be due to the high export volumes of the steelmaking sector during the period.

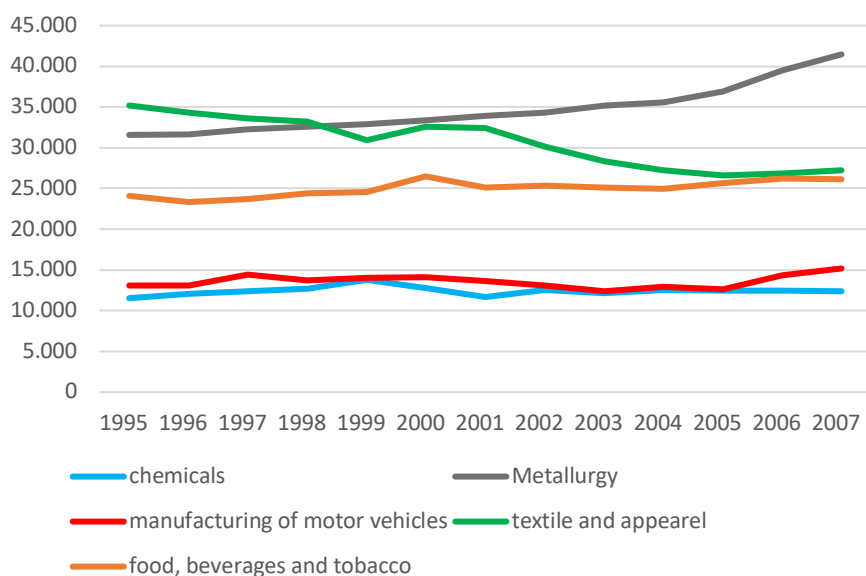


Figure 58 Gross value added from different sectors (mln, EUR) (ISTAT, 2024a)

It is relevant to point out that it is here that the crisis of the traditional sectors of Italian manufacturing is most visible, with textiles and apparel making up a very telling case. While the trade balance for this sector was strongly positive, the value added had seen a steep decline of roughly 23% between 1995 and 2007.

6.3) Feeling in a Straitjacket: FIAT loosening the ties with the Italian system

The automotive sector, traditionally a strong focus of industrial political attention in Italy, was undergoing a steep process of restructuring that was tightly related to the crisis of the main national manufacturer FIAT. In this period, the Italian car manufacturing system seems to have undergone a process of redefinition of its functions in the global car making scene.

To begin with, the only national OEM, FIAT, was undergoing, in the early 2000s, a deep financial crisis and, by 2004, the net financial position (NFP) of the group was negative by 5 billion euros, while the operating income statement was negative by 1.5 billion euros (FIAT, 2005).

Furthermore, it can be seen in Figure 59 that the trade balance for passenger cars had seen a dramatic worsening over the years, while the trade balance for intermediate parts remained positive and growing. This can partly confirm the early ensuing of the trend, often pointed out in interviews (Interviews 50, 70, 71), for Italy to increasingly become a producer of intermediate parts, rather than assembled motor vehicles. We would indeed expect the import of intermediate parts to decline and the export to grow if production locations for finally assembled vehicles are offshored and if domestic suppliers need to look to expand their customer base. Crucially, it can be seen that the trade balance of passenger cars is what most strongly drives the overall sectoral trend. Moreover, data shows that foreign direct investment in the car sector had started increasing in 1995 and reached already a fairly high point in 2002.

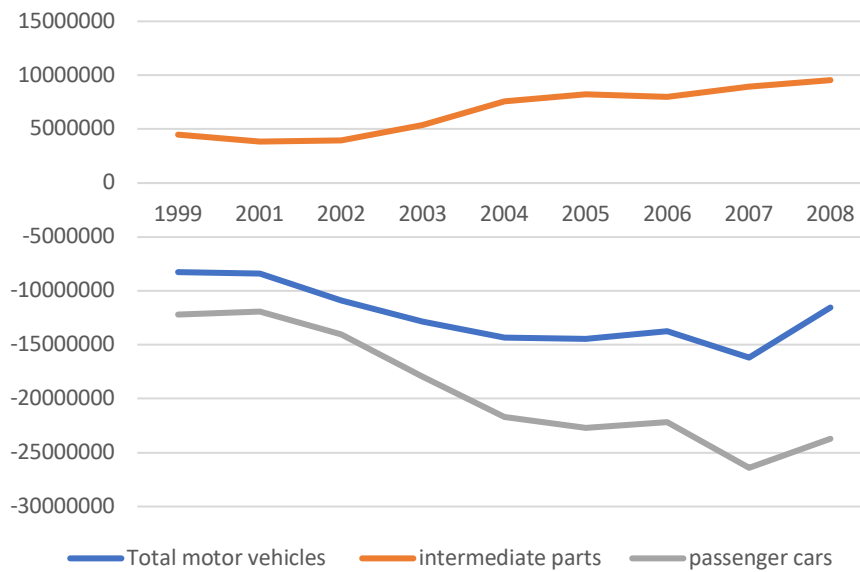


Figure 59 Trade balance for the manufacturing of motor vehicles (mln, EUR) (own calculations based on: OECD, 2024a)

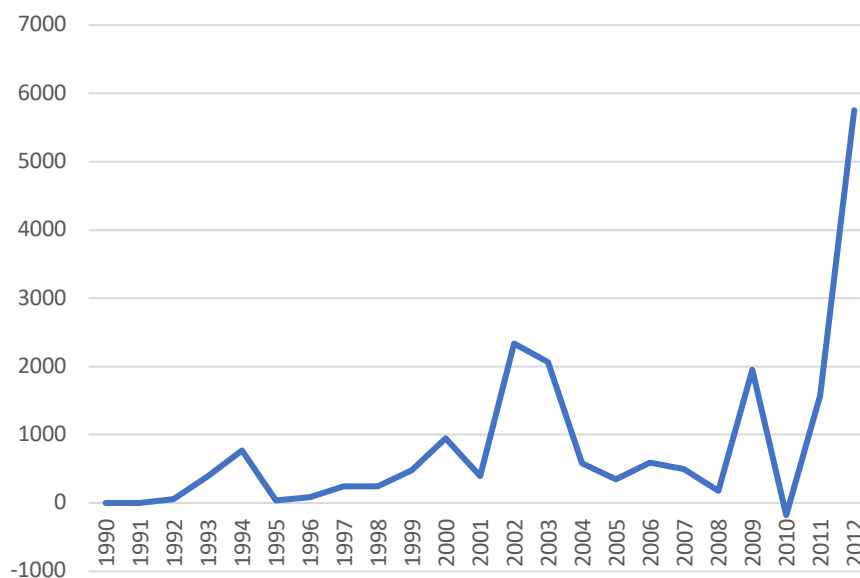


Figure 60 FDI outflow from the Italian automotive industry (mln, USD) (OECD, 2024b)

To add to this, the Italian car market was on the shrinking trend over the 2000s, making so that domestic companies would structurally be more inclined to follow the drive of foreign markets. The structure of incentives was thus strongly skewed towards internationalization not only of FIAT but of the whole system of suppliers. The head of the National Association of Italian Automotive Supply Chain (ANFIA) would point out how, by 2008, 72% of the Italian car suppliers operated on more national markets (Razelli, 2008). Moreover, the owner of the main Tier-1 automotive supplier brand, Alberto Bombassei

would point to the small dimensions of Italian companies as a problem when it came to compete on internationalization and innovation (Bombassei, 2008).

Although some state instruments were used in order to aid this internationalization drive, it would be very far from reality to say they had a decisive impact. An example is the support of foreign investments by SIMEST (*Società Italiana per le Imprese Miste all'Estero*), namely the Italian agency responsible for financially aiding internationalization efforts. In fact, the largest sectoral share of the companies supported by SIMEST was labelled as part of the mechanical and electro-mechanical sector, automotive being part of it (SIMEST, 2003). The second instrument was the Agency for Promotion Abroad and Internationalization of Italian Enterprises (ICE), which supported the internationalization of the sector through targeted specific plans.

What nevertheless seemed to have provided oxygen to the sector was the recovery of 2006-2007, strongly aided by the car scrapping incentives that the Prodi government introduced to support the sector and renew the national car fleet in favour of lower emission vehicles.

The FIAT CEO Marchionne could thus announce that the FIAT Group was back to profits and paying dividends, and even announced substantial investment in the Italian system in the future (Marchionne, 2007). In the same occasion, Marchionne and Razelli praised the new industrial policy course of the Minister Bersani, who introduced a set of “strategic areas” for funding of innovation projects that included mobility (Razelli, 2007; Marchionne, 2007)

Razelli thus called for a proactive government coordination in two kinds of ways. First, the government should join a “systematic coordinating table” with the interested ministries, in order to stabilize sectoral priorities on some crucial themes, such as transport, energy policy, research and environment (Razelli, 2007). Interestingly, part of responsibility of this roundtable should have been to elaborate “strong positions, that should then be defended in the venues of decision-making, where our main competitors for too long now have managed to craft coalitions” (Razelli, 2007). The reference is to the European level, where the Italian automotive industry complained in several instances that its interests were sacrificed in favour of more influential automotive actors in other member states. Marchionne also stressed the point arguing that the European emission regulation, disadvantageous for FIAT, was “the result of political pressures aimed at protecting the individual interests of some participants to the car market” (Marchionne, 2008).

The second call of Razelli was for a “National ten-year plan for sustainable mobility” between the government and the whole national supply chain.

At a more general level, demands of the industry included lower taxes, investment in R&D, and the incentivization through the continuation of car scrapping subsidies (Razelli, 2007; 2008; Marchionne,

2007). Complaints were also raised about the crisis in the segment of bus production, that suffered from the declining public investment in mobility (Razelli, 2007).

The Italian car industry was also starting to elaborate its own positioning vis-à-vis the Green Transition, and especially the regulation of CO₂ emissions. Already in 2007, Marchionne argued that an approach based on shifting the costs of the transition only on carmakers was to be excluded and that FIAT would invest in the methane-powered cars, a segment over which it allegedly held a leadership position and a market advantage (Marchionne, 2008).

Overall, the car industry did not miss government attention and seems to be the only sector that factually enjoyed some forms of direct “expensive” support by the government in the form of scrapping incentives, which were introduced by the Prodi II government and continued by the Berlusconi III government. Nevertheless, a real industrial plan was missing and support did not go beyond these forms of indirect subsidization aimed especially at maintaining the occupational levels by avoiding a collapse of the sector.

6.4) Italian chemistry between small size and the internationalization spurt

As a further important part of the Italian export-oriented manufacturing, the chemical industry was also a central actor in the Italian manufacturing transition. The industry saw a consistently negative trade balance, and a stagnating value added. In 2004, the conjunctural panel of Federchimica was highlighting the steady loss of market shares on foreign markets, a trend that, as seen, was shared by Italian manufacturing at large (Polimerica, 2004).

The crisis of the Italian chemical sector was due to multiple reasons, partially independent of each other, which hit the industry from several angles. First, the broader Italian manufacturing system was in decline. Considering that the chemical sector, especially in the Italian case, overwhelmingly produces intermediate goods, manufacturing decline hit this sector particularly hard (Rich-Mac Magazine, 2003). Second, the strong Euro over the dollar made so that the exchange rate would have particularly worsening effects for the chemical producers, especially in those segments of the sectors that depended on cost competitiveness (Rich-Mac Magazine, 2003). Third, Italian energy prices were among the highest in the whole Europe, which obviously made up a competitive disadvantage vis-à-vis not only the main chemical producers, Germany and France, but also vis-à-vis the new emerging economies (Polimerica, 2004). Fourth, the dimension of Italian chemical companies was far smaller than their German or French competitors. The first two largest Italian chemical companies, EniChem and Polimeri Europa, were both indirectly state-owned and had revenues for 4.8 billion and 1.4 billion Euros

respectively. By comparison, the two largest German companies, Bayer and BASF, had revenues for 32.2 and 29.6 billion respectively. This made so that, by 2009, as much as 36% of chemical production in Italy was accounted for by foreign large companies, overwhelmingly German, which were also the most R&D intensive and represented 44% of the country's export (Mutinelli et al., 2009). The increase in the share of foreign operators was also due to developments in the 90s, when several Italian chemical companies were acquired by foreign players (Rich-Mac Magazine, 2002).

One of the most visible reactions by companies was to increase their investment abroad. The number of enterprises engaging in foreign investment (mostly within Europe), increased by 30.4%, while the number of foreign companies where Italian companies held shareholdings raised by 64.9% (Federchimica, 2011a). Part of this movement is a spillover from the offshoring happening in other sectors of Italian manufacturing (e.g. textiles), and was due to the strategy of ensuring geographical proximity, and thus flexibility, to the industry's costumers. Although this is not mentioned in the documents consulted, it is reasonable to hypothesize that energy prices may also have been an accelerating factor.

In this timespan, the focus of industry demands seemed to lie on the promotion of research and development, considered as the pathway to upgrade production and boost competitiveness.

The second Berlusconi government partially addressed this issue in 2005, when Federchimica and the National Council of Research (*Consiglio Nazionale delle Ricerche*, CNR), the main state research institution, signed a framework agreement of cooperation that could have a strong de-risking potential for investment in the chemical sector (CNR, 2005). Part of this agreement made so the CNR would acquire costs and risks relative to the applied research activity. Beyond the difficulties in accessing the funds and the burdensome bureaucracy, this agreement carried great potential for the industry, since a problem for many innovative companies was, even after the financial crisis, that the costs of innovation not always had a return in terms of revenues. In fact, the availability of customers to recognize a higher price for more innovative products was reported to be scarce (Federchimica, 2011a). This created a disincentive for companies to engage in highly risky but potentially innovative R&D projects.

Overall, the chemical sector was mostly left to its own means and industrial policy instruments had been used in a patchy way. Despite awareness of the need to take action, industrial policy in this period remained mostly a marginal theme in the political debate, and in general no serious plans were undertaken for its relaunch (Interview 52).

6.5) Steelmaking and the 2000s boom

Differently from the previous two sectors, the story for steelmaking looks different and it did not start in a context of crisis, but rather in a context of boom. For steelmaking, the 2000s were years in which the competitive pressure was relatively lighter since World demand for steel was rising. The 2000s were factually the years of strongest increase in the world production of steel since the 1970s crisis. Between 2000 and 2004, the average growth rate of the sector was 5.7%, in contrast to 2.4% of the previous five years and – 0.5% in the 1990-1995 period (International Iron and Steel Institute, 2005). In particular, in the early 2000s, the Riva group acquired from the former state-owned IRI the ILVA of Taranto, one of the largest steelmaking plants of Europe. In the early 2000s, the group held the 11th position in the global steel production, tightly close to the German group ThyssenKrupp. Italy overall held the 10th position as a steel producing country over the same period.

Nevertheless, as already shown in the trade balance data, Italy as a steel producing location was losing ground. By the year 2000 the country had gradually been losing its position in the global steel market, with dropping quantities and World shares (International Iron and Steel Institute, 2000). Furthermore, in 2003, Italy was the fourth world importer of steel, but only the 9th world exporter. Therefore, domestic steel companies saw rising revenues, but imports outvalued exports by far, differently from what happened in Germany and France, who remained net steel exporters (International Iron and Steel Institute, 2005).

6.6) Between erosion and confusion: Italy reforming its instruments of state finance

Beyond specific sectors, the overall approach of Italian industrial policy in the 2000s can be defined as non-interventionist at best. Although rhetorically espoused across parties, no real industrial policy plan for the relaunch of Italian manufacturing was undertaken.

A factor looming large in this decade was a strong uncertainty primarily regarding the instruments that should have been used to implement industrial policy. After getting rid of the instrumentation that for decades had supported the whole industrial policy approach of the country (e.g. SOEs and public banks), the result was uncertainty on what steps to undertake next in a period of competitiveness crisis.

During the 1990s the paradigm had been to support the broadening and maintenance of the productive base in the Italian Mezzogiorno, through some horizontal compensatory policies that would subsidize investment. This went under the Law 488/92, which established a mechanism of incentives and subsidization for investment in certain areas, especially in the South. This rather universalistic instrument turned out to be very popular. Around 25% of the mobilized investment was accounted for

by Law 488/92, followed by the export-credit regime (17%) and “tax credit for under-used areas” (11%) (MISE, 2006). Further important instruments were the incentives for self-employment (Law 185/2000) and the Central Guarantee Fund (*Fondo Centrale di Garanzia*).

In this framework, R&D and innovation policy played a secondary role, mostly delegated to the two funds FAR (*Fondo di Agevolazioni alla Ricerca*) and FIT (*Fondo per l’Innovazione Tecnologica*), which lent funds for innovation projects. Over the 2000-2005 period, 43.4 billion Euros were spent in incentives and facilitations (MISE, 2006).

At the beginning of the 2000s, this traditional “universalistic” approach was politically considered to be inefficient and unsustainable and therefore the whole system underwent a series of reforms. Independently of the partisanship of the government, the reforms had consistently two goals.

On the one hand, they were aimed at reducing the cost on the public budget of industrial policy measures. In fact, the clear perspective was to reduce public funds for such activities in the years as part of the Italian commitment to honour the Maastricht criteria and reduce public debt (MISE, 2007; 2008). Industrial and promotional policy was thus one of the first victims of austerity.

On the other hand, the idea was to shift to a new paradigm that would not aim at the expansion of the industrial base, but that would rather be selective in terms of the strategic objectives that individual investment projects wanted to achieve. In particular, R&D and innovation policy was considered the main priority of investment in order to promote the technological upgrading of the Italian traditional sectors, as well as increasing productivity (MISE, 2006; 2007; 2008).

It is important to consider that these cost-saving measures were introducing cuts in a field that was already underfunded to begin with. As a matter of fact, the state aid report of the European Commission showed that Italian state aid was among the lowest in the whole EU in Italy and estimated to amount to 3.8 billion euros in 2005 (European Commission, 2006). By comparison, in the same year, Germany disbursed 16 billion Euros in state aid and France 7.4 billion euros.

The new paradigm that the governments wanted to pursue implied mixed policy methods, some “compensatory” and some more “selective”, but with a decisive preference for the latter. Moreover, it implied a mix of “vertical industrial policy”, targeting innovative sectors and enterprises with larger growth potential, and more horizontal forms of industrial policy (e.g. tax bonuses for R&D activities).

Towards the end of the second Berlusconi government, the system of incentives started being completely reformed.

The *Comitato per lo Sviluppo* was established in 2005, with the purpose to coordinate the subsequent industrial policy projects. The government introduced thus the Integrated Programmes of Industrial

Innovation (PI3), with the goal of making a first step towards the implementation of this new “selective” and “strategic” industrial policy orientation (MISE, 2006).

The incentives granted by Law 488/92 were thus reformed to lean towards mixed forms of financing and to drastically cut the potential audience of the beneficiaries. The main points of the reform were the introduction of a financing mix of grants and cheap credit (which would be conceded by CDP), a maximum and minimum investment threshold, priority to innovative activities, and the obligation to previously obtain financing at a market rate. It was especially this latter requirement that led to a reduction of the SMEs beneficiaries, especially in the South, which often could not provide the guarantees required by the banks.

With the government change in 2006 (Prodi II government), the new Minister of the MISE implemented another steep reform of the system which nevertheless was in strong continuity with the preceding government. The “Industria 2015” plan by minister Bersani introduced the instrument of the “Projects of Industrial Innovation” (PII), which made more real the purpose of creating a unified instrument that could mix grants with loans. The PIIS intended to be a more restricted industrial policy instrument, in that it set four main macro-areas of financing: energy efficiency, sustainable mobility, life technologies, new technologies for the Made in Italy and innovative technologies for cultural activities and goods. Particularly the second and the third of these would find the approval of the automotive and chemical industry. These projects would be enacted only by the subsequent government and would be funded for around 200 million for each area, except for cultural goods, with 100 million (MISE, 2009). Furthermore, “automatic” tax incentives for investment in research activities were introduced.

The most important reform promoted by Bersani was nevertheless the institution of the “developmental contracts” (*contratti di sviluppo*), which would later replace the older “contracts of programme” (*contratti di programma*). The broader goal of the two instruments is the same, namely to promote large industrial investment, especially in the South. However, the *contratti di sviluppo* differ in three important respects. First, they expanded the sectoral reach of the instrument to tourism and trade, beyond manufacturing. Second, they had as audience not only large companies, but also the SMEs system around a certain project (*filiere*). Third, the management of the instruments is delegated to the Invitalia agency.

Overall, it can be seen that the Industria 2015 plan had three main goals, broadly consistent with the policy tendency already initiated by the previous government. First, it was aimed at accelerating the demise of compensatory “universalistic” instruments in favour of a more targeted and selective approach. Second, it clearly privileged the sectors at high technological intensity, starting from the idea that then these would have spillover effects over the competitiveness of traditional sectors. The previous instruments, instead, started from the idea that by incentivizing investment demand, then innovation would have followed suit. Third, and perhaps most importantly, it expands the interlocutors of the large

industrial policy plans not only to large companies but to the whole system of suppliers (the so-called *filiera*).

The subsequent government, the third Berlusconi government, did not bring substantial changes to the Industria 2015 plan and rather expanded on the already existing instruments.

As a general assessment, industrial policy in this phase was thus featured by a rather inconclusive transition to new instruments. As can be very clearly noticed, despite the policy orientation of the governments was similar in this field, every government introduced some new instruments (e.g. PI3 and PII) and implemented some reform with two main effects. First, the continuous reforms of the system of incentives led to some forms of paralysis in the system of incentivization, which was saw two drops in requests in 2005 and 2007 precisely because of regulatory uncertainty (MISE, 2006; 2008). Second, no instrument could be established in this period as the main reference for development policy.

Such instruments needed to fulfil a requirement: they needed to be cheap. The main problem that seems to have been decisive in the bi-partisan adoption of this approach is the tight budget conditions. Due to the tight budget conditions imposed by compliance with the European budget rules, previous approaches were considered to be expensive, despite the Commission report showed that Italian state aid was comparatively low.

The necessity to be “cheap” also meant a disengagement from the regional developmental mandate, leaving it exclusively to the instruments dedicated to the regions included in the social cohesion policy of the EU. Conversely, favouring innovation-related investment meant that policy would necessarily be favouring the already developed regions of the North, as shown by the fact that 94% of the R&D tax incentives were granted in the North (MISE, 2009). The “tax credit for disadvantaged area”, the main remaining instrument for convergence policy, exhausted the resources allocated for the 2007-2013 timespan already in June 2008, thus needing a revision that just spread the resources over the years (MISE, 2009).

Moreover, industrial policy at large did not feature as a particularly salient concern in the political agenda of the governments and opposition alike over the analysed timespan (Interview 49). The debate rotated more around several reforms of labour legislation and the pension system.

This passive stance towards industrial policy had particularly important consequences for state-owned enterprises. In fact, the industrial state-owned enterprises that survived the 1990s privatizations underwent a process of corporatization, namely they became public companies with floating stock values and that should be managed in all respects as private companies. The loosening political pressure on the management made it increasingly independent and gradually act according to its own agenda (Interview 49). This process was partially wanted, in that the new paradigm was that industrial

companies were to be managed in all respects as industrial companies. This is nevertheless the period where Italian SOEs started establishing their role as corporate actors, that would fill the gap of a lack of big influential private business actors, as well as become influential agenda-setters (Interviews 49,69, 57). It is particularly explicative in this respect that the MISE would discuss the “future of the chemical sector” directly with the ENI manager Scaroni, especially if reminding that ENI controlled the largest chemical corporation in Italy (MISE, 2009).

Considered from the point of view of sectors, there seems to be awareness regarding the existence of some core traditional sectors of Italian manufacturing, for instance basic chemistry, automotive, metallurgy and shipbuilding (MISE, 2006). Nevertheless, governments remained generally far from intervening to favour the relaunch of specific sectors. The only sector that factually enjoyed particular political and practical attention was automotive, which was directly supported through the scrapping incentives that were discussed earlier. In this specific case, support to automotive meant support to the single national champion of Italian automotive, namely FIAT. However, as already seen, it seems that governments of every colour failed to defend the sectors’ interests in the international arena.

At this stage the competitiveness crisis was in its latent phase and it took the form of a prolonged and rather slow decline, not triggering a sense of urgency. The 2008 and the 2011 crises would change the situation dramatically and brutally accelerate this process of erosion of the Italian manufacturing base.

6.6.1) Looking for budget-light instruments: the reform of CDP

With shrinking budget, the second Berlusconi government started devising instruments that would not add up to the existing public debt, thereby allowing broader policy space. It is with this kind of vision that, in 2003, the Minister of the Economy and Finance (MEF) Giulio Tremonti, promoted the privatization of Cassa Depositi e Prestiti, namely the cession of 30% of the shares to the Banking Foundations, which supposedly were to exert a sort of surveillance role on the fact that the bank would work as a market unit. This latter motive was particularly important to make the Eurostat accept CDP as a market unit and thus make so that its liabilities would be considered outside the perimeter of public debt. Considering that CDP main liabilities are postal savings, including CDP liabilities within the public debt would also automatically lead to postal savings being calculated as public debt, with important consequences on public budget.

This move towards the transformation into a market unit was thus overwhelmingly motivated by an emulation of what other advanced industrial economies had already been doing: delegating industrial policy and part of state participations to market units that would be considered outside the perimeter of public debt in statistical terms, but over whom the government would still have the upper hand (Bulfone

& Di Carlo, 2021). A similar process was promoted for the Institute for Foreign Trade Insurance Services (SACE), the main Italian agency for export insurance and guarantees, which was also turned into a market unit in 2004.

The very first period of CDP as a market unit was mostly dedicated to the initial legal and administrative conversion to its new industrial policy mission. The role in financing infrastructure was also strengthened by the establishment of a new fund for infrastructure. Since the original role of the bank was to finance infrastructure and lend to municipalities, it was clear that it still had to develop a know-how in industrial finance.

In this period the state also started sowing the seeds for transforming the bank in a big holding of state corporations. For this purpose, the Ministry of Finance emanated a Law Decree on the 27th of January 2005, detailing the guidelines for the acquisition of company shares by CDP. Most importantly, the Law Decree allows CDP to acquire company stocks by using funds from postal savings, provided such stocks would serve the main goals of the organization by statute.

It is presumable that this was initially an accounting strategy for the state, for bookkeeping purposes, to sell some companies to the now “privatized” bank, and cash in a compensation for those shares.

6.7) Facing two storms: the financial and debt crisis and the final blow to on-budget development policy

From what illustrated in the previous section, it is clear that the Italian industrial system entered the 2008 financial crisis in already very precarious conditions. Beyond the competitiveness crisis detailed above, GDP growth in 2006 (+ 2.0%) and 2007 (+ 1.5%) was comparatively lower than in France (+ 2.4% both years) and Germany (average of + 3.5% in both years).

Therefore, Italy went into a – 1.0% recession already in 2008 and – 5.3% in 2009. Moreover, again differently from France and Germany, economic growth in 2010-2011 did not compensate for the losses. In sum, the country experienced a deeper recession and an insufficient rebound of growth.

The recession looks even more radical when looking at value-added by sector. Depending which edition of the ISTAT database is chosen, the estimated drop in the value added of Italian manufacturing fluctuates between 16% and 21.4% (ISTAT, 2024a)³⁷. Looking at the individual sectors, it is remarkable

³⁷ In order to make data more comparable between sections, the ISTAT Edition 2024 will be used for reporting data on value added, unless good reasons to do otherwise subsist. In the 2011 and 2014 editions, the drop in value added is considerably larger, namely 21.4%

how the core of the historically strategic sectors of Italian manufacturing was hit particularly strong. In terms of value added, the chemical industry (except of pharmaceuticals) dropped by 16%, machinery by 17%, automotive by 28% and metallurgy by 47%.

6.7.1) Doing the bare minimum: crisis management in automotive

As the historically central sector in Italian industrial policy, it does not surprise that automotive was the most directly supported sector. In 2009, FIAT revenues dropped by 16% compared to 2007 and, by 2010, the number of cars produced in Italy had dropped by 35% (FIAT, 2010; ANFIA, 2011).

Nevertheless, political reaction was not particularly quick, considering that the crisis task force (*Tavolo di Crisi*) between the MISE and the automotive industry was only opened in April 2009. In the context of the crisis task force, the industry requested a series of conjunctural measures that involved easier access to credit, relief from personnel costs and some related to R&D (ANFIA, 2009). For what concerns access to credit, the industry requested the institution of instruments for easier credit lines in Italy, comparing the situation to Germany, where instead such credit lines were already operational. Moreover, the industry asked a facilitation of access to some forms of financing granted by the EIB through a state guarantee or by the use of CDP. Furthermore, the government was solicited to accelerate the extension of SACE competences to the concession of guarantees for buying motor vehicles. In terms of labour costs, the industry asked for the extension of the *Cassa Integrazione Guadagni* (CIG), the main social unemployment insurance for crisis periods. Eventually, from the point of view of R&D, the remark was fundamentally the difficulties of companies to sustain the costs alone, considering the very high riskiness of such investments in the conjuncture.

The main form of support granted by the government was in the form of car scrapping incentives, in order to foster demand for new models, and it costed overall 1 billion euros to the public budget. The industry expressed appreciation for the outcome of the measure, stating that, without the subsidies, the volume of sold vehicles would have been 460 thousand lower (over a total of 2.1 million) (Razelli, 2009). In the segments of the industry where the subsidy did not apply (e.g. busses), sales contracted.

Moreover, the extension of the social subsidy of *cassa integrazione guadagni* (CIG)³⁸ was widely used in order to relieve the industry of personnel cost or exceeding working hours, thus avoiding massive

³⁸ The Cassa Integrazione Guadagni (CIG) is a form of social insurance through which the state pays a part of a worker's salary during a determined period of time, usually during company crises. A common arrangement is that the company would decrease the working hours of employees, compensating them for the hours worked, and the state would pay a part of the non-worked hours.

layoffs. Although this was a general demand, the pressure seems to have been particularly high in automotive, where the use of this instrument increased by 653%.

In terms of access to credit, the state agency SACE was also mandated to intervene to provide guarantees for purchasing motor vehicles (Law 5/2009, Art. 6, Comma 1).

Support to the sector did nevertheless not go beyond this form of demand stimulation and generalized cost relief. Targeted support and large bailouts of the kind of Opel were not to be seen.

For instance, car companies were hit by a credit crunch for which barely any measure was taken. In his speech to the Senate in November 2009, the president of ANFIA Razelli demanded, beyond a continuation of the incentivization policy, the institution of a “Fund for Automotive Suppliers” (*Fondo per l’Indotto Auto*), which would have been a fund of guarantees (similar to the *Fondo di Garanzia per le PMI*) allowing to companies of all sizes to obtain middle-to-long term financing. In particular, the industrial political goal of this fund would have been to foster competitiveness of the industry by promoting processes of aggregation between companies and acquisitions, as well as promoting investment in innovations. (Razelli, 2009).

In the same speech, the ANFIA president pointed to another critical issue, namely the fact that “[t]he non-harmonized interventions of European governments, following the EU Recovery Plan of December 2008 (...) directly sustaining companies of the sector (as in France and Germany) suggest a serious risk of a comeback of protectionist policies” (Razelli, 2009).

The only remarkable case of aid in automotive was that of the historical supplier of car parts (car bodies) Bertone S.p.A.. The company was on the verge of insolvency and was put under the so called “special administration” (*amministrazione straordinaria*), a particular legal instrument whereby the state can intervene in the temporary management of companies of strategic importance in moments of crisis by appointing some governmental “commissaries”.³⁹ The company was temporarily administered and then sold in august 2009 to FIAT, which made a very generous offer and proposed a relaunching plan (La Repubblica, 2009). FIAT would subsequently take back its word on the investment plan arguing that “[a]t the moment, conditions do not subsist for the beginning of the planned investments”, apparently also as a consequence of the high presence of the FIOM union in the factory (Il Sole 24 Ore, 2011). The company subsequently filed for bankruptcy in 2014.

The crisis period had nevertheless the effect to accelerate two gradual changes that were already happening before. The first and most obvious one is the erosion of Italy as a country manufacturing and

³⁹ The *amministrazione straordinaria* can be either requested by the company or established by the government in specific circumstances. Sometimes, but not always, it is connected with a credit line or a capital injection by the state.

assembling vehicles. In fact, while in 2000 1.7 million vehicles were being produced in the country, by 2005 the quantity had dropped to 726 thousand, further declining to 573 thousand in 2010 (ANFIA, 2011).

This first and more fundamental change accelerated a second important change, namely the gradual strategic repositioning of Italian suppliers towards foreign markets and especially foreign operators (Interview 71). To be sure, such change was already ongoing before the crisis and especially involved the larger suppliers (Camera di Commercio di Torino, 2004). Nevertheless, the crisis remarkably accelerated the process due to the emerging contradiction in goals between the FIAT management and the stakeholders, including governments and trade unions. Especially since 2009, it was clear that FIAT had more than a doubt about continuing its investments in Italy, and even more after the dispute between FIAT and FIOM in 2010. Remarkable is to notice that, despite the drop in revenues, FIAT was not excessively hit by the crisis and there was no discussion of bailout options or similar interventions. As a report for the Senate pointed out, FIAT was the only European automaker to go through the crisis without extensive state aid (Unioncamere & Prometeia, 2015). In 2010, revenues raised back by around 12%, and the company cashed in profits for 600 million euros (FIAT, 2011). Moreover, the corporation was planning an ambitious expansion in the US through the acquisition of Chrysler and was also involved in a potential acquisition of Opel (La Stampa, 2009).

This gradual break from the Italian system by FIAT had its peak and its most visible manifestation in 2011, when FIAT left Confindustria, and the historical Italian FIAT plant of Termini Imerese was shut down. FIAT quitting Confindustria had important consequences not only for automotive but for the Italian corporate system overall, in consideration of the leading historical role the main manufacturer producer had in coordinating the Italian corporate sector. As the only large company in a structurally strategic sector like automotive, FIAT carried an influential role, especially in collective bargaining and in influencing the industrial policy line of the governments (Interview 67). Moreover, the fact that a very large part of the suppliers depended on FIAT revenues made the occupational impacts on the whole supply chain a potential economic earthquake, as was feared in 2004, when FIAT was in deeper financial troubles (ANFIA, 2018). Moreover, the crisis had the temporary effect of paradoxically increasing the dependence of suppliers from FIAT for their revenues from 47.8% in 2008 to 63.2% in 2009, and back to 56% in 2011 (ANFIA, 2011), hinting to the fact that foreign OEMs were the first to halt the orders once the crisis ensued.

For the account given in this chapter, the detachment of FIAT will gradually over time have the important effect of a “wake up call” also for Italian policymakers, too often stuck in an automatic identification of FIAT interests with national interests (Interviews 70, 50).

6.7.2) Losing chemistry: the large company crises in the chemical industry

In the sign of “accelerated continuity” was also the crisis in the Italian chemical sector (Federchimica, 2011a). However, the chemical sector was structurally different in that it is mainly a provider of intermediate goods for a variety of other sectors (e.g. construction, automotive, etc.). The first reaction of the buying sectors during the crisis was thus to stop orders, leading to a quick drop in revenues. Therefore, the crisis in other sectors, especially construction, automotive and consumer electronics, immediately impacted the chemical sector. Although the trade balance improved, this was only due to the fact that imports declined by 5%, while exports only by 1.5%.

Moreover, a competitive blow to the industry, especially in the Italian case, was given by rising prices of raw materials, which was making the industry less price competitive already in the previous years. For the Italian industry this was a particularly pressing issue, since companies did not have the critical dimension to have some pricing power on their buyers, who often happened to be very large companies (Federchimica, 2011a; 2011b).

Again as a consequence of its nature of producer of intermediate goods, the credit crunch impacted the chemical industry in two ways. First, the tightening of credit impacted the sector through its effect on its main industrial customers, who, lacking immediate liquidity, halted the orders. This turned many chemical companies, to use Squinzi’s words into the “banks of their customers” (Federchimica, 2009a).

Second, the credit crunch had a particularly strong effect on innovation-oriented companies needing to finance their projects, that were now becoming too risky. This daunted investment in innovation, especially considering that the Italian chemical industry lacked pricing power when it came to charge higher prices to have a return on innovation (Federchimica, 2011a).

In his speech for the re-election as the president of Federchimica, Giorgio Squinzi argued that “[a]n industrial policy supportive of change is needed, relaunching sectors in difficulty and sustaining those, like chemicals, that have a future” (Federchimica, 2009a). Both in that occasion and in the parliamentary hearing of the industry, Squinzi raised as main demands simplification of legislation as highest priority, the problem of high energy costs and the need to sustain commercial transport infrastructure and research. He also criticized the current mechanisms of incentivization of R&D projects as “absurd” and providing uncertainty (Federchimica, 2009a; Camera dei Deputati, 2009). In his subsequent speech to the parliament in 2009, the Federchimica president also pointed to the fact that the existing research agreements, for instance the previously mentioned one with the CNR, factually do not deliver satisfactory results and they do not work as they should (Camera dei Deputati, 2009).

It is noticeable nevertheless that no demand was raised for particular forms of sectoral support in terms of funding. This may be also because the chemical sector, not being considered among the “sensitive sectors” according to European legislation, had better opportunities to access the fundings available from the *Fondo di Garanzia per le PMI*.

Despite the recognized strategic importance of the sector, no targeted measures were undertaken as was the case with automotive, and a plan of relaunch remained missing.

The only specific measures that was undertaken was the “agreement for export”, through which the ICE agency took the commitment of financing until 50% of the initiatives with the goal to boost exports towards BRICS countries (Mutinelli et al., 2009).

When it came to large company crises, however, the topic of the destiny of the chemical sector became very salient, also for the important occupational consequences it was related with.

In fact, the chemical sector also displayed a case of use of the “*amministrazione straordinaria*”, specifically for the company Ineos Vinyls Italia S.p.A, a fairly large company (370 employees) and largest Italian producer of PVC. This was a private company but with strong historical ties with the Italian state-owned ENI. In fact, Vinyls was previously a joint venture between EniChem and the British company ICI, and was subsequently fully acquired by the British Ineos. ENI kept maintaining a structurally important role for Vinyls, by holding ownership of the plants and being the main provider of certain raw materials (Corriere della Sera, 2013), a situation of dependence from which Vinyls tried to get out by asking, and being denied, to acquire the Assemini plant. In 2008, Vinyls ended up cumulating almost 80 million euros of debts to ENI and thus Ineos declared its intention to disengage from the Italian activities.

The government thus put the company under the *amministrazione straordinaria* regime. The government attempts between 2008 and 2011 to find new buyers failed. After the change of government in November 2011, the new Minister of Economic Development Corrado Passera took office. Asked about the intentions of the government for Vinyls, Passera refused to address directly the issue, also pointing to his recent taking office and reliance on his collaborators at the ministry (Camera dei Deputati, 2011).

ENI was in several occasions, both by politicians and by the industry itself, accused to have a strong responsibility perspective shutting down of the Vinyls plants and not to have intervened in its driving role for the Italian chemical industry (Camera dei Deputati, 2009; 2011; 2012). Moreover, ENI threatened, in 2009, to stop delivering raw materials to Vinyls if it would not receive 30 million Euros for a partial coverage of debts (Camera dei Deputati, 2010). In sum, ENI was definitely obstructing, or at least not facilitating, the process.

It is nevertheless highly unclear whether a factual contrast between the government intentions and ENI existed on this matter, especially after the technocratic government of 2011 took office. While it appears very clearly that ENI did not want to be involved in the bailout of the plants, a big question mark looms over the intentions of the government.

The member of the Deputies Chamber Francesco Barbato, from the Italia dei Valori party, claimed to have inquired ENI about its role in the deep crisis of the whole segment of chemicals (Camera dei Deputati, 2012). He reported:

“[D]o you know what ENI answered me, Mr Minister? That “it is true that Vinyls is strictly connected to ENI, and thus its survival could have depended on us (ENI, edit), but these are political choices, they depend on the government and on politics, they have to intervene. We are the implementers, since it is the Treasury as single shareholder to decide, not us”. (Camera dei Deputati, 2012: p. 19)

Noticeable in this respect is that the Treasury (MEF) is taken into cause here by the alleged statement of ENI, and not the MISE.

The local councilor for “productive activities” of the city of Ravenna, where one of the plants was located, accused the Ministry (responsible of the matter in the regime of *amministrazione straordinaria*) of having completely neglected to ensure that written agreements would be in place that would ensure the supply of raw materials to the plant, which was then missing raw materials right in the moment it could operate (Il Fatto Quotidiano, 2013). The councilor also declared that they attempted several times to reach the minister, who instead remained silent and at best would generally mention some ongoing negotiations. Vinyls Italia eventually filed for bankruptcy in 2013 and its plants were subsequently shut down and closed (Il Fatto Quotidiano, 2013).

Connecting the dots, a cautious but realistic interpretation of the matter may be that the government, engaged in budget cuts, realized that a relaunching of the plants would have meant some form of public subsidy and a conflict with ENI. This would be fully consistent with the evaluation in part of the interview material of the Monti government as not really fond, and even hostile, to industrial policy (Interviews 49, 50).

Considering that Vinyls Italia was one of the few large companies in the Italian chemical sector and, most crucially, that it was the largest Italian producer of the strategic material PVC, its final abandonment on the side of the government is puzzling, even more considering that shutting down the plants had the eventual effect of making Italy dependent on imports for PVC.

A crucial background condition here was the struggle to find a buyer for the company, especially in a moment of crisis and especially in Italy, where very few chemical companies had the critical size to engage in these activities. A more “developmental” approach would have implied that the state would

step in at this point, perhaps through the control on the corporate giant ENI, to stabilize the sector. This nevertheless did not happen. The government non-developmental orientation seems to be the main explanatory factor here, together with the acquired independence of ENI's management.

6.7.3) Looking outside to survive: the chemical industry on the path to accelerated internationalization

The recovery of the chemical industry followed a similar story to that of the Italian industry at large. While exports recovered very quickly in 2010, the overall growth was sluggish. The sector lost 12% in revenues in 2009, but it only recovered by 8% in 2010. By comparison, the German chemical sector declined by 14% in 2009 and recovered by 17.2% in 2010. Overall, however, the chemical industry performance did not show an irremediably gloomy picture, if seen in perspective. The Federchimica report points to the fact that the sector “only” lost 0.4% of its share on the global market since the year 2000, while the Italian manufacturing sector at large lost 1% (Federchimica, 2011a). The value added of the sector stagnated, between 2010 and 2015, at a level slightly below the pre-crisis level, but it then started rising again in 2015 outperforming the pre-crisis levels (ISTAT, 2024a).

In order to adapt to the new situation, Italian chemical companies followed several strategies, overwhelmingly oriented towards boosting their internationalization and increasing in scale.

To begin with, companies reacted predominantly by increasing their export propensity. For instance, 44% of chemical companies declared a shrinking importance of the Italian market, not only due to the crisis, but also due to new competitors from Eastern Europe and China (Federchimica, 2011b). In this respect, the aid provided by the ICE agency may have helped, although evidence about its eventual results is missing.

The tendency of chemical Italian companies to invest abroad was also an established tendency before the crisis. Compared to the year 2000, by 2008 the number of internationalized Italian companies had grown by 24.5%, while the number of foreign companies participated by Italian companies had grown by 31.8% (Mutinelli et al., 2009). In 2009, the comparison with the year 2000 was of 30.4% more internationalized companies and 64.9% more foreign companies participated by Italian companies (Federchimica, 2011a).

Furthermore, the crisis also led to a wave of consolidation in the industry, with 23% of the companies reporting M&A activity.

Overall, it seems safe to say the Vinyls case can be considered to be exemplary of the industrial political stance of the government vis-à-vis the chemical industry. Although the previous government did not

factually put money on the table, the idea that the sector should at least have been supported and relaunched was on the agenda. Conversely, the subsequent government dealt with the matter as an annoyance.

6.7.4) A fall from grace: the crisis of metallurgy and steelmaking

While the chemical and automotive industries managed to recover, at least in terms of value added, a different scenario is that of metallurgy. Only in the year 2009, the sector lost 42% in value added generated, and, in 2017, the value added generated was still 15% lower than 2007 (ISTAT, 2024a).

There were certainly some tendencies that were worrying the industry even before the crisis, among which the rising prices of raw materials, due to international oligopoly positions, foreign trade practices by competing producer countries, and the very high cost of energy, which is estimated to be 30% higher in Italy compared to the European average (Federacciai, 2008).

The crisis led to a steep fall in production and, as in automotive, extensive use of the cassa integrazione in order to avoid mass layoffs. Of 65 thousand employees in the sector, 25 thousand were using the cassa integrazione in 2010 (Federacciai, 2010a).

Industry requests for action went towards different directions, but overwhelmingly were focused on the solution of problems that were already considered as competitive gaps in the previous period. First, the government was blamed by the industry not to have mobilized the necessary financial resources to sustain the economy in 2009, differently from what had been done in Germany (Federacciai, 2010a). Second, the perceived threat from Asian producers became more real and the industry advocated for anti-dumping measures, especially pointing to the fact that China became in ten years the producer of 45% of the world steel (Federacciai, 2010a; 2011). Third, the inadequate infrastructure and the cut in infrastructure spending is claimed to have been a strong competitive gap for the industry, especially for logistical needs that make transportation costs too expensive (Federacciai, 2011).

Where the industry expressed satisfaction for government policy was instead in the field of energy policy, although energy costs kept remaining a problem (Federacciai, 2010a; 2011).

As a matter of fact, the government set in motion a set of targeted policies that aided the sector. In particular, it supported the financing of “interconnectors”, namely the infrastructure network allowing to import energy from abroad. According to Federacciai (2010b) this really impacted on the energy competitiveness gap, to the extent of allowing companies to enjoy energy prices comparable with some European competitors. Moreover, the gas storage infrastructure, also fundamental for the industry was

promoted through contracting to ENI. Eventually, the industry also praised the acceptance of the demands of the steelmaking companies in the revision of the “Interruptible energy supply contract” (*contratto di interrompibilità*⁴⁰).

Differently from what happened in other sectors, the direct role of the state in the industry was much more active, likely because of the particularly steep crisis condition of the sector.

An example is the Eurallumina case, where a memorandum of understanding was signed with the MISE and other stakeholders to allow the relaunching of production in the plant. This was not a trivial decision, since the plant was considered to have very poor competitiveness perspectives due to the very high costs of raw materials, transportation and electricity (MISE et al., 2009).

The memorandum was aimed at providing a structural cut to the main sources of competitiveness loss by the company, by investing in a coal-fired cogeneration plant that would be owned by a joint venture participated 60% by Eurallumina and 40% by the regional financial institution of the Sardinia Region (the SFIRS). Eurallumina would have full control over the governance of the company, making thus the SFIRS participation factually a subsidy.

In the memorandum, both state and regional finance were mobilized in substantial amounts. The agreement dictated that, of the overall 100 million Euro investment required for the electricity plant, Eurallumina would invest 20 million, SFIRS 20 million and the government would give a low-interest rate loan of 60 million.⁴¹ Moreover, the state-owned ENEL would provide the full quantity of coal required for the plant operational capacity.

However, the *contratto di sviluppo* that should have implemented the agreement was only eventually signed in 2015, much later than the initial “deadline” of 2013. (Invitalia, 2015). This lack of timeliness in the agreement does not have an official or unofficial explanation. The most likely case is that the project was purposefully or unpurposefully blocked until 2015, when the Renzi government took a stance in favour of steel as a strategic sector and decided to activate resources. By 2018, however, the condition of the project was still being defined as “in stand by” (Invitalia, 2018).

Eurallumina was nevertheless not the only case in which the government decided to intervene in steelmaking. In 2012, after being declared insolvent, the Lucchini Spa was accepted the request to undergo the regime of the *amministrazione straordinaria*, thus being temporarily managed by the MISE. It is interesting to notice that one of the first actions undertaken by the political management of the crisis

⁴⁰ The *contratto di interrompibilità* is an agreement between industrial companies and the electricity grid operator (the SOE Terna) with which the consumer gives availability to stop electricity use upon request, in exchange of either a compensation or a discount on energy prices.

⁴¹ To be more precise, the funding and the project would later be merged with the already existing “*Piano Sulcis*”, due to bureaucratic obstructions coming from European State Aid screening.

was to re-establish relationships between the company and the financial group of the state-owned railway company *Ferrovie dello Stato Italiane* (FSI) (Lucchini, 2014). This is even more relevant if considering that, right in the same plan, there is the project to focus on the more value-added products including train rails. A case of indirect public procurement? It is hard to say. In any case, it seems plausible that the special administration aided the agreement. As will be more extensively discussed in the next chapter, the Lucchini case did not turn out to be particularly cheap for the public budget either.

The overall situation in steelmaking after the crisis was thus one of extreme loss of productive capacity. While the trade balance became positive, both exports and imports declined over time, but imports simply declined faster (Figure 61), presumably as an effect of both foreign competition and especially the drop of production in connected industrial sectors. In particular, the construction sector was estimated to account for 22% of steel demand in Italy in 2013 (Federacciai, 2011; 2014), making it the largest individual consumer of steel. Considering that investment in the construction sector was 18% lower in 2011 than it was in 2007, the powerful impact of the drop in orders for steelmakers becomes evident (Federacciai, 2012). Moreover, the decline in automotive production, representing 9% of steel consumption, may also have had an impact on the domestic demand (Federacciai, 2014).

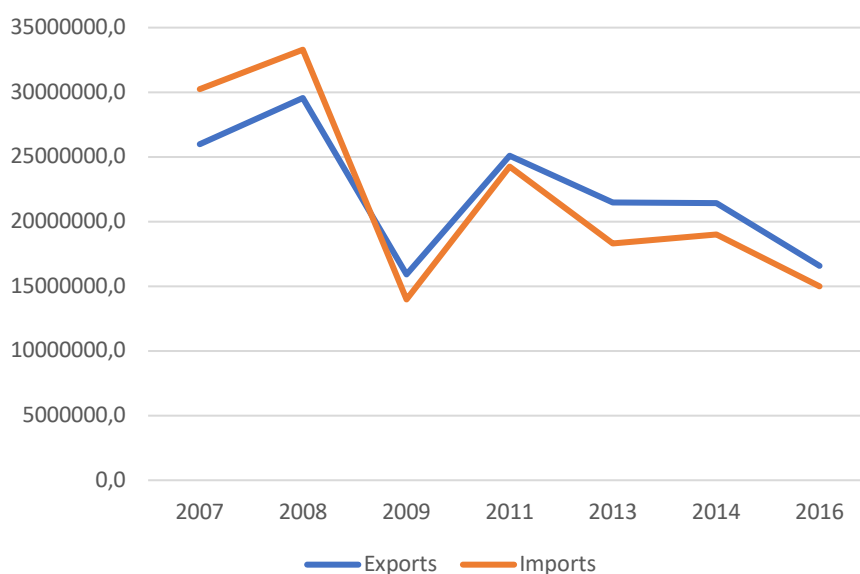


Figure 61 Imports and exports in metallurgy (thousand, USD) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

The critical and entrenched situation in the sector would lead, in the subsequent years, governments to repeatedly intervene with plans for the relaunch of industrial plants, which also included the main national player in steelmaking, namely the Riva Group, that started incurring in heavy losses in the years following the crisis (Riva Group, 2014; 2015).

6.7.5) The construction sector at the verge of its steepest crisis

Strictly connected with the fate of the steel sector is, as mentioned, the steady and dramatic decline of the Italian construction sector. Compared to 2008, the value added in the sector was down by 15% in 2013, with the decline continuing until 2015, when it stood at -28%. In terms of investments in the sector, between 2008 and 2012 the loss was of – 27.1% (ANCE, 2012)

However, much more than other sectors, the construction sector is highly heterogeneous and is mainly standing on three pillars. First, there are micro and individual enterprises that engage with everything that has to do with renovation and repairing (e.g. plumbers). Second, there are companies specialized in building residential housing or commercial buildings, generally small or medium. Third, there are those operators who are specialized in infrastructure work of many kinds, from railways to highways and bridges. These latter companies can be of any size but they tend to be definitely larger than those in the other two categories (Interviews 54, 55). Despite there are some companies operating in more segments, the overwhelming majority is specialized in one (Interview 54).

Although the whole sector was impacted by the crisis, it was predominantly infrastructure builders that saw the steepest decline, reason for which it was not only and not so much the financial crisis to be at the origins of the decline, but rather the debt crisis of 2011 (Interviews 54, 55). The drop in public investment in infrastructure in the years 2009-2011 reached – 34% compared to 2008 (ANCE, 2011). As a consequence, this triggered a strong wave of closures of small businesses that depended economically from these contracts (Interview 54). This has led to diverging trends within the sector, with the whole segment of reparation and renewals growing, while the other two segments stagnated or declined (Interviews 54, 55).

Furthermore, small companies were not the only ones to have been hit by the crisis. In fact, around 20% of large construction companies did not survive the crisis, which left a sector already featured by the micro dimension with even less large operators (Interviews 54, 55). According to observers, this also has led to a loss of know-how and specific company skills that were assets for the national system (Interview 54).

Government measures in support of the sector were virtually absent, although some incentivization for renewal work was done, and the loosening of the internal stability and growth plan should have given the municipalities leeway to invest. Furthermore, looking at the *contratti di programma* announced in the crisis years, one can easily notice that, except the updates, the newly published contracts were

virtually all related to infrastructure⁴². However, incentives regarded almost exclusively the segment concerned by repairers, while the remaining sectors were left to their own means (Interviews 54, 55). Also the establishment of CDP Investimenti SGR, the CDP fund dedicated to promoting social housing, was very limited and had almost a negligible impact on the sector (Interview 54).

There was a case of use of the *amministrazione controllata* for the large construction company Impresa spa, which bankrupted in the period of the crisis. Nevertheless, the case is very specific, in that it appears that the company cumulated tenths of millions in debts, 80 of which towards the public budget, and employed company money to personal enrichment of the family owners (Il Corriere della Sera, 2016).

In general, there was scarce political attention to the sector during the crisis, especially because it was clear that there was a trade-off between fiscal austerity and investment in infrastructure, since cutting further on social expenditure was not politically viable (Interviews 54, 55).

The drop of the internal market led to construction companies, especially the medium and large ones, to recur to the construction equivalent of export, namely foreign contracts (Interview 55). These tend obviously to be larger companies that have become very internationalized and thus managed to partially escape the drop in internal demand.

6.7.6) Indecisive and with little room for moving: Italian industrial policy in the crisis

The chapter has been discussing how different sectors of economic activity have reacted to the economic crisis, their demands and how governments took, or did not take, action to preserve or support them. So far, the picture is thus still not exhaustive, in that we only have small hints regarding how the general industrial policy response to the crisis looked like.

The previous parts however nicely display a general pattern, namely the lack of a sectoral industrial strategy mixed with intervention in individual company crises when these carry heavy occupational consequences. In the intentions, this was not radically different from the German approach to the crisis. Engaging in large company crises meant nevertheless by no means that public finance would be mobilized, and this was indeed an uncommon outcome.

The general approach of crisis management was shaped by one big concern, namely budget consolidation. The concern was already looming large in 2009, when the deep financial and industrial

⁴² A complete list of the *contratti di sviluppo* for the considered period can be retrieved at: https://ricerca-delibere.programmazioneeconomica.gov.it/?q=contratto+di+programma&anno=&numero=&start_seduta_data=01%2F01%2F2009&end_seduta_data=31%2F12%2F2011&gu_data=

crisis was putting under stress bank lending behaviour, and the first victims were to be governments in structurally weaker countries with high public debt.

This limited the room of manoeuvre and the unwillingness of the ECB to support individual sovereign bond markets was once more a reason for governments to fear a loss of confidence by international investors, as eventually happened in 2011. There was consequently limited room to use the Temporary European State Aid Framework. In 2009, total state aid in the EU was of 427 billion euros, namely 3.6% of the EU GDP, including crisis measures. Italy only made 10.2 billion euros of state aid available, corresponding to 0.6% of the GDP, while by contrast Germany provided 116.8 billion euros (4.8% of GDP) and France 42.3 billion (2.2% of the GDP) (European Commission, 2010).

Therefore, the whole industrial policy course of the period was not so much concerned with which sectors to relaunch, but rather with cutting the existing resources and understand which sectors should “lose less” in terms of support. The MISE (2011) makes this very clear, stating that “*[p]ublic anti-cyclical intervention was meant to privilege few and targeted productive sectors, considered to be priority and having strong systemic economic value. The intention is to modify the existing productive structure, trying to develop competitive advantages in the sectors with strong development potential. Hence the insistence on Research and Technological Innovation as lever for the promotion of competitiveness of the entrepreneurial system and as flywheel of the productive recovery at large, considering the strong repercussions of technologies on all the economic sectors*” (MISE, 2011: p. 11)

The apparent inherent contradiction in this statement is between the “targeted” nature of the support and the focus on a horizontal measure as R&D. The contradiction is nevertheless only apparent, since, as seen, R&D was particularly salient for specific sectors, and specifically for manufacturing.

The government thus introduced yet new instruments with the 2009 Contracts of Technological Innovation (*Contratti di innovazione tecnologica*) dedicated to R&D programs more expensive than 10 million euros. Moreover, the funds FIT Generalista, FIT REACH and FIT Start-up were established.

However, R&D support could clearly not be considered to be counter-cyclical, in that returns from such investments are mostly medium-term. This orientation may have had pro-cyclical effects, especially for the most disadvantaged regions of the country.

In the total distribution of incentives and subsidies, there was a strong decrease in the instruments aimed at productive and territorial development. While such instruments made up 46.3% of the total disbursements in the 2005-2007 period, this percentage dropped to 29.8% in the 2008-2010 period. Conversely, R&D disbursements increased their share from 34.21% to 54.25%. This obviously came with a redistributive tendency in favour of the North for the country, where the overwhelming majority of R&D funding was requested (MISE, 2011).

This becomes evident when looking at the aggregate of incentives disbursed. There was an overall reduction of the national and regional disbursements of aid in the crisis period. However, this reduction turned out to be 92% for the South and only 10% for the Centre-North. This is explained by the fact that the generalized reduction of national funding could be compensated by the northern regions, who stepped in to supply funding with their own programs (MISE, 2012).

The main “expensive” instrument of crisis management was recurring to the so called “automatic stabilisers” and particularly the *cassa integrazione guadagni*. This was factually the main counter cyclical instrument used by the government and a very effective one, especially for large companies. The government also introduced a series of novelties making this instrument much more flexible and extending its reach. In particular, specific agreements for the *cassa integrazione* extension were viable provided that there would be an agreement involving trade unions, leading to a remarkable strengthening of the role of social partners and in many companies unions got presence due to this (Interview 59). As seen, in the steelmaking sector, the use of the *cassa integrazione* approached 38% of the workforce, and in automotive its use increased by more than 600%. The main advantage of using this instrument is that it allows to avoid processes of hysteresis whereby the crisis would leave higher long-term unemployment, and, at the same time, it allowed companies to use the workforce flexibly according to the new volume of demand. Similarly, the so-called *Tremonti-ter* also provided a useful anti-cyclical incentive, in that companies could detract from taxes up to 50% of their new investment costs in machinery.

Other than this the only “balance sheet heavy” anti-crisis measure was the car scrapping incentive, which costed 1 billion euros. A similar incentive was designed for the purchase of furniture or electronics in the context of a building renewals, but the conditions were so restrictive that the measure ended up costing 43 million euros only (MISE, 2011). Furthermore, there were also some measures to sustain the “fashion sector”, which was also remarkably hit by the crisis (MISE, 2009).

6.7.7) Rediscovering off-balance sheet finance

Lacking budget flexibility, the main goal of the government was to shift as much of the industrial and counter-cyclical policy as possible off the balance sheet. This first of all meant a declining importance of grants in the overall incentivization policy, which declined from 1.15 billion euros in 2006 to 68.7 million in 2011 (-94%), in favour of lower-interest loans and guarantees (MISE, 2012: p. 71).

There were then the series of individual company crises, where the MISE intervened as an intermediary, the so called “crisis task forces” (*Tavoli di Crisi*). The crisis task forces were attempts at micro-concertation, where the government would try to facilitate a solution to individual company crises,

facilitating the discussion between company management, trade unions, and local governments. In some cases, national or especially local public resources would be mobilized (e.g. Eurallumina), but these were rather exceptions than rules. Overwhelmingly, they were used to craft agreements to manage the use of the *cassa integrazione* especially for large companies. In some occasions, the MISE intermediated the attempts to find external investors.

The most important innovation boosted by the budget crisis period was nevertheless an extensive innovation in the instruments of state finance.

Most popular is the extension of the Guarantee Fund for SMEs (*Fondo di Garanzia per le PMI*), which the MISE (2011) elected as the main instrument to guarantee liquidity. The financial endowment of the fund was increased to 1.6 billion euros and the maximum limit for each individual funding passed from 500 thousand to 1.5 million euros. Moreover, its range of intervention was expanded to traditionally excluded sectors, but still excluding the so-called “sensitive sectors” (which include steelmaking and automotive, aerospace and shipbuilding). Most importantly, the fund was endowed with a “state guarantee of last resort” (zero weight), which made the guarantees much safer for banks. The *Fondo di Garanzia* massively extended its volume over the next years. While the volume of guarantees in 2006 was 759 million euros, it reached 4.4 billion in 2011, with a peak of 5.2 billion in 2010.

The so called “Special Rotational Funds” (*Fondi Rotativi Speciali*) were further used as balance-sheet sparing instruments by the Monti government, through the institution of the “*Fondo per la crescita sostenibile*”, initially endowed with 2 billion euros⁴³ (Il Sole 24 Ore, 2012). The advantage of the *Fondi Rotativi Speciali* is their relatively low impact on public budget. A rotational fund is “self-sustaining”, namely it should finance its investments through income received from the revenues of previous investments (hence the “rotational” nature). They are usually not directly included in the public balance sheet, except when they received their starting endowment. Specifically, the *Fondo per la Crescita Sostenibile* was tasked with very similar investments that would have usually been the task of MISE, namely R&D, investment incentivization and support to internationalization. The important difference is that, except specific cases of externally granted projects, a rotational fund can only extend loans, and not disburse subsidies.

Beyond the further expansion of Funds as instruments, even steeper changes involved the Cassa Depositi e Prestiti, whose functions were remarkably expanded. Faced with the need to rapidly implement support measures, the government found in CDP a very handy and flexible instrument and, similarly to what happened to the German KfW, the bank accelerated its buildup of intervening capacity in the industrial

⁴³ DL 22/06/2012, n. 83, Art. 23

sector. Differently from the German KfW, however, for CDP this was a truly groundbreaking change, since, as mentioned, the bank did not engage in industrial policy *strictu sensu* before.

To begin with, the laws and bank statute were modified to put CDP in the conditions to act as a counter-cyclical instrument for general lending to the economy, by overwhelmingly using its own means, and complementing them with some forms of state support for interest rate subsidies (as with the new FRI: *Fondo Rotativo per il Sostegno alle Imprese e gli Investimenti in Ricerca*) or through the use of state resources (as in the case of *territorial pacts* or “*area pacts*”). Furthermore, CDP expanded its reach to the SMEs⁴⁴, by making 8 billion euros available and by setting in motion the constitution of an Italian Fund for Investment in SMEs (*Fondo Italiano di Investimento per le PMI*). Differently from the arrangement for larger companies, for SMEs the lending intervention can happen only through the intermediation of a bank.

The bank was since then allowed to provide financing for internationalization projects, provided these obtained a guarantee by SACE, for a total amount of 3 billion euros for 2009-2011⁴⁵. With this, the government tried to provide the grounds for an “integrated system of export-bank”.

Moreover, 12 billion euros were made available for infrastructure and 18 billion for financing to the public sector. From distribution shown in Table 3, it can be noticed that the activity of economic support of the bank reaches, in this period, almost the level of its traditional historical activity, namely financing the public sector, and especially regions and municipalities⁴⁶. The fact that this could be done overwhelmingly by CDP’s own resources made it an even more powerful instrument for a government with tight margins of manoeuvre.

⁴⁴ This stands out as a very important step, considering that CDP was predominantly focused on large companies or companies of systemic importance. This change required a specific law, the DL 5/2009 and the L 33/2009 and L 191/2009, which allowed the use of postal savings to support SMEs for the purpose of sustaining the economy.

⁴⁵ The legal foundation of this reform is the Law 102/2009, Art. 8

⁴⁶ Important to specify that, in 2010 and 2011, the CDP market share on the stock of debt of local public administrations was still at an average of 45%. When measured on the flow of debt for 2011, it is estimated that the CDP share for 2011 was 80%, pointing out a presumably important counter-cyclical role for local municipalities during the debt crisis (CDP, 2011).

Fields of activity	Billion Euros
Financing to the public sector	18
Support to the economy + export bank	16
Infrastructure	12
TOT	46

Table 3: resources mobilized by CDP by policy goal (bn, EUR) (CDP Annual Reports).

For infrastructure, a new Rotational Fund was established (*Fondo Rotativo Infrastrutture Strategiche – FRIS*). Noticeable is also the fact that direct funding of infrastructure investment by CDP had, by statute, to be funded without the state guarantee⁴⁷.

CDP activity of support of the economic recovery would be continued in the subsequent years. In 2009, CDP made available a plafond of 8 billion euros for SMEs, and, in 2012, a new plafond was established, increased to 10 billion euros (CDP, 2010; 2013)⁴⁸. By the end of 2012, the resources made available to SMEs amounted to 18 billion euros, 58% of which actually employed. Both the SME plafonds were implemented through an agreement with the ABI (*Associazione Bancaria Italiana*), the association representing banking business. In 2011, a further financing initiative for 2 billion euros was set in motion in order to provide lending to SMEs that were experiencing delays from payments by the public administration (CDP, 2012).

The export-bank project was met with high demand and thus the plafond was increased to 4 billion euros and the arrangement was further extended in 2012, when CDP signed an agreement involving SIMEST and ABI aimed at extending the operational perimeter to supplier credit (*credito al fornitore*), and to provide financing in US Dollars.

Furthermore, as mentioned, the fund CDP Investimenti SGR was established, although with rather limited endowment, to support social housing by trying to mobilize private capital.

⁴⁷ CDP Statute, Art. 3, Comma 1: updated to 2009

⁴⁸ The first 8 billion euros plafond, established in 2009, was exhausted only in July 2012, which raises questions, not answerable in the context of this chapter, regarding whether there was a lack of demand, or simply de-facto difficulty in accessing financing. The information gathered for this work failed to provide an answer to this question.

However, perhaps the most important innovation of this period is the establishment, between 2009 and 2011, of the *Fondo Strategico Italiano* (FSI): a CDP fund, initially 90% owned by CDP and 10% by Fintecna, but later co-participated with private investors, with the goal to invest in equity of internationally competitive companies of “relevant national interest”, provided they have proper profitability perspective and are in good financial health. Regarding the sectors of intervention:

“Of relevant national interest are considered (as established by the decree of the Minister of Economy and Finance of the 8th of May 2011 and by statute) those companies operating in the sectors of defence, security, infrastructure, transportation, communication, energy, insurance and financial intermediation, research and innovation at high technological content and public services” (CDP, 2012: p. 17).

It is easy to see how this definition leaves enough leeway for interpretation regarding what is “strategic”, and thus it is hard to identify here a proper “focus” of the fund. To make this provision even more vague, it is then specified

“Outside these sectors, possible targets of FDI are companies that, cumulatively, report yearly revenues not lower than 300 million euro, and an average number of employees not lower than 250. This threshold can be reduced until 240 million euros of revenues and 200 employees in case of companies whose activities are relevant in terms of indirect economic impact (indotto) and produce benefits for the economic and productive system, also in terms of presence in the territory of productive plants” (CDP, 2012: p. 17).

Here, importantly, the reasoning was thus not related to “strategic sectors”, but rather to “strategic companies”, with the critical criterion being the rather large size or the systemic importance. According to the CDP Report for the year 2011, the role of FSI as a potential aid for aggregation processes triggered interest from many in the industry.

The debt crisis also accelerated the process of movement of state shares in strategic companies from the Ministry of Treasury to CDP, in order to cash-in money to reduce the stock of public debt. This sort of “mock privatization” saw an abrupt acceleration in 2012, under the technocratic government. In 2012, CDP bought 100% of SACE, 76% of SIMEST, and 100% of Fintecna. This operation allowed the Treasury to cash in 8.8 billion euros. However, this also created a further layer of separation between the privatized state-owned enterprises and the government, which worked in favour of a strengthened operational independence of the management (Interview 49).

Finally, a fundamental component in this period is the building up of capacity in a more strictly technical sense. In particular, these were the years in which CDP developed its risk assessment and management departments further, as well as expanding its IT infrastructure (CDP, 2010).

Table 4 displays an overall summary of the main projects and activities in the context of the counter-cyclical activity of CDP in the 2009-2012 period. Several of these will then lay the ground for further initiatives in the following years.

Initiative / project	Description		2009 (bn EUR)	2010 (bn EUR)	2011 (bn EUR)	2012 (bn EUR)
Plafond SMEs I and II (2009-2012)	Initiative of support for SMEs, provision of liquidity and/or investment capital Plafond 8 billion (I) and 10 billion (II)	Stock	0.4	2.6	5.8	5.8
		Flow ⁴⁹	+ 2	+ 3.5	+ 2.5	+ 3.7
FRI Fund	Fund to finance investment and R&D	Stock	0.6	0.7	0.8	0.9
		Flow	+ 0.27	+ 0.1	+ 0.17	+ 0.14
Export bank	Financing for internationalization and export finance, provided there is a SACE guarantee Plafond 4 billion euros.	Flow	/	/	0.81 billion ⁵⁰	0.66
Disbursement of state aid	A part of the state aid (e.g. interest rate subsidies) was disbursed through CDP, which acted as a mandated institution.	Stock	+ 0.2	+ 0.2	+ 0.1	+ 0.06
CDP Investimenti SGR (Fondo Investimenti per l'Abitare)	Fund of investment into social housing, by investing in specialized funds	Fund Size	/	1.67 ⁵¹	1.93	2.0

Table 4: Lending and investment activity of CDP by area (bn, EUR) (CDP, 2010-2014)

6.7.8) The hesitant rediscovery of direct intervention and the role of SOEs

To conclude the overall picture of the government reaction to the two crises, a final remark should be made on more direct forms of intervention.

⁴⁹ With „flow“ it is here meant to define the “new contracts”, which go to impact on the stock only once the agreed loans are actually disbursed. However, there is always a lag between the agreement and the total disbursement of the amount, reason for which the stocks may not overlap the sum of the new flows.

⁵⁰ Exclusively due to the financing to a Fincantieri customer

⁵¹ This only the dimension of the fund is specified, which includes private investors who invested in the funding rounds. The Fund was established in 2010 by CDP, who used 1 billion of its own resources.

In particular, it was previously mentioned how the government used the *amministrazione straordinaria* in order to rescue some companies from specific sectors. However, the procedure of the *amministrazione straordinaria* was also used for other specific cases such as the electronics producer Antonio Merloni Spa, for which 72 million of national and local resources were made available. For several other cases, like Eutelia or Saturno Materie Plastiche Spa, this instrument was used without adding public resources, and often only in order to grant an ordered transition of the company to bankruptcy. Therefore, it can be seen that the use of the *amministrazione straordinaria* is not necessarily a proxy for the sectoral priorities of the government, although it can be clearly seen that a special place was reserved to manufacturing.

An important aspect that cannot be neglected is the government management of the crises that affected state-owned companies, which did see the government involved in a decisive industrial political attempt of relaunching.

The most expensive bailout operation of the period was indeed for a state-owned enterprise, namely Alitalia, which received, in 2008, a 300 million state loan to ensure the continuity of service until the end of the year. The government also promoted a consortium of banks and corporations that would invest in Alitalia for its relaunch into the new *Compagnia Aerea Italiana* (CAI). Although the sheer size of the bailout makes it deserving of mention in this context, the investment in Alitalia was not so much motivated by industrial reasonings, but rather by the infrastructural nature of the company and by the alleged strategic importance to have a national “flag carrier” in passenger air transportation.

A particularly important case is Fincantieri which, in all respects, stood out as a national champion and one of the most important shipbuilding companies worldwide. It would not be an exaggeration to say that Fincantieri was driving the growth of the sector and the related industrial policy in Italy.

The crisis hit the shipbuilding sector particularly hard, since the global market condition was one of overcapacity and of a rising influence of China and South Korea, who, thanks to cheaper labour cost and a generous procurement and subsidization policy, could acquire larger shares on the global market (MIT, 2009; Fincantieri, 2010; 2012a; Interview 10).

Specifically, in Italy, the crisis hit the supply chain, which also comprises several SMEs and whose survival is fundamental in order to ensure continuity in the supply chain of the final product and to keep some specific know-how (Fincantieri, 2010; MIT, 2009). Fincantieri was also hit by the crisis particularly strong. While in 2008 the new orders to the company amounted to 2.5 billion euros, this declined to 1.8 billion in 2009 (- 30.5%) (Fincantieri, 2010). The crisis also led to a reduction in the number of employees by 5% and, in 2011, the company had roughly 10.000 employees, making it a very large company in the Italian scene.

To some extent, the fact that Fincantieri had a highly diversified portfolio, including segments like yachts that were less affected by the crisis, may have avoided even further contraction of the company balance sheet, differently from what happened in German shipbuilding, where production was mostly concentrated in merchant ships (Interview 10).

There is little doubt that the Fincantieri situation enjoyed strong government attention, and sectoral experts would define Fincantieri as “apparently a holy animal for the Italian government” (Interview 10).

The company participated to the crisis task force and agreed on a relaunch plan with the government, setting up an industrial plan that involved further diversification and a focus on technological upgrading for increasing competitiveness and thus justify higher prices vis-à-vis the rivals. Moreover, government support was given for the entry of Fincantieri in the US market (Fincantieri, 2010; 2012b).

It is highly interesting to notice that, in the context of the “export bank” program with SACE, the largest project that was approved was indeed a Fincantieri project. CDP financed an export credit of 1.5 billion, insured by SACE, to buyers of two Fincantieri ships. Considering that the plafond to the export bank was 4 billion, this makes up a very high percentage of the overall available funding. It would thus not be too far from reality to guess that the fact that such a large conglomerate was a state-owned enterprise may have facilitated, or at least influenced, the decision to strengthen export instruments. The report of Fincantieri does also explicitly mention CDP and SACE as playing an important role for the shipbuilding sector in the crisis time (Fincantieri, 2010).

Eventually, two further initiatives regarding SOEs deserve further attention. One is the investment, of 1.8 billion for supporting the aerospace sector, a segment where another state-owned enterprise, Finmeccanica, stood out as a player of global importance (MISE, 2009). The other, in the field of utility, is the government establishment of CDP GAS as a financial vehicle aimed at buying the TAG GmbH (Trans Austria Gasleitung GmbH), a gas pipeline infrastructure that the Commission requested ENI to sell for reasons of competition policy. The government thus used CDP GAS in order to ensure the continuity in national ownership of this strategic infrastructure for energy policy.

To conclude, the industrial measures undertaken by the government were rather extensive but strongly limited by the pressure on sovereign debt yields. This implies that industrial policy had to be “cheap” and therefore more selective. The final section of this chapter will attempt to provide an assessment as to whether this found “selectivity” turned into a sectoral strategy and to outline some explanations for the course undertaken.

6.8) Conclusion: the long struggle to take back control

This narrative of Italian industrial policy and state finance until the last financial crisis stands out as a story of growing uncertainty regarding instruments and focusses.

The industrialization phase following the second world war created a synergic system between the state- and privately-owned enterprises, whereby the state would directly intervene entrepreneurially in those sectors where the private industry failed to deliver. Objective of those policies was a positive trade balance and the development of a strong manufacturing industry across different sectors and with a specifically strong focus on metallurgy, this latter being the strategic sector par-excellence in the Fordist period. This was complemented, until the 1980s, by tight coordination between the government and FIAT (ANFIA, 2018), historically the central private sector actor with whom the government coordinated industrial policy.

The 1990s dramatically changed the context in which the Italian state would need to re-set its industrial policy approach. First, the industrial conglomerate IRI and the system of state-owned finance were dismantled, and only a residual part of the related SOEs remained in public hands. Second, the goal to comply with European treaties took precedence over developmental goals, that were now subordinated to reaching the public debt targets set by the Maastricht Treaty. Governments were thus, to begin with, unwilling to engage in “heavy” forms of industrial policy. What is more, the agreements adopted by the Lisbon Strategy in 2000 mandated that state aid should have been reduced anywhere.

When the competitiveness crisis struck the overwhelming majority of traditional sectors of Italian manufacturing, the government was fundamentally disoriented. Precisely this heterogeneity of the Italian productive structure made so that the competitiveness crisis would strike many sectors, all carrying a relevant systemic importance. In such context, it appears natural that governments tried to give a bit of something to everyone. It was simply difficult to decide what a strategic sector is, as also seen in the ambiguous definition provided by the FSI.

This is connected with the considerable problem of “size” in the Italian corporate system, which has political consequences at least in two respects. First, lacking players of critical size makes so that the lobbying effort of the industry were much more dependent on its organizational power than by the power that an individual organization can bring to the bargaining table with the government (Interview 50). Especially in a historical period where the tendency is towards a disorganization and fragmentation of the field of employers (Interview 67), the political influence of a sector can turn out to be much weaker.

Second, and relatedly, lacking large players introduces a very important element of complexity in the understanding of the demands of a specific sector. “*What is good for FIAT, is good for Italy*” says a

quotation unofficially attributed to Gianni Agnelli. While this is obviously a simplification, it appears that understanding the problems of a player of reference functions as a frame for politicians to then take action. This is especially true if one individual player drives the revenues of the largest part of the chain of national suppliers, as was the case for FIAT. It can factually be seen that automotive was the sector of destination of the single most expensive “sectoral” measure, the car scrapping premia. We will see in the next chapter how the gradual disengagement of FIAT from the sector will have consequences in this respect, providing another element of indecisiveness for policymakers (Interviews 62, 50).

Therefore, the Italian peculiarity of being a manufacturing power with a very heterogeneous sectoral composition and a strong prevalence of SMEs, created the perfect conditions for leaning towards more horizontal forms of industrial policy.

This was particularly evident in the crisis. As a matter of fact, the largest and most expensive industrial measure adopted during the crisis was the extension of the *cassa integrazione*, which was very high in the priorities of manufacturing across sectors. The extension of the *Fondo di Garanzia* was also implemented in this logic, since a range of strategic sectors (e.g. automotive and steelmaking) were outside the reach of the fund as “sensitive sectors” according to European regulation.

It is also relevant to point out that, although automotive was the main beneficiary of an ad-hoc program of car scrapping incentivization, the idea that the automotive crisis was taken seriously by the government shades when we observe it from a comparative perspective. As a matter of fact, the Italian support was the “cheapest” of all the European car producing countries. Germany, Spain and France made all use of the overall loosening of state aid regulation mostly for automotive (Unioncamere & Prometeia, 2015). Spain is a particularly important case in this respect, as it dismisses the idea of the budget condition as the main explanatory variable for lacking a sectoral industrial policy. In 2009, the government approved a Competitive Plan of the Automotive Sector (*Plan de Competitividad del Sector Automoción*), which made available 800 million euros in loans and subsidies for the sector, beyond more generous and longer-lasting car scrap subsidies.

The credit lines made available by CDP could nevertheless have been used as an instrument to ensure lending to sectors excluded by other instruments. From the data I collected, however, I could not find evidence that the government was particularly concerned about specific sectors when deciding on the CDP credit lines. Moreover, the credit line programmes by CDP were not nearly as generous as those put in place by the European competitors, especially the German KfW.

As seen, the government nevertheless did show some selectivity during the crisis when it came to intervene in individual companies. There, it appears that the first principle of intervention was the potential occupational consequences, therefrom the interventions in steelmaking. However, it can also

be seen how this kind of intervention suffered from a lack of consistency over time, as illustrated by the Vinyls case.

The companies where something of more akin to an industrial strategy was implemented were state-owned enterprises, and in particular the case of Fincantieri, where a plan of relaunch and financial support was set in motion.

The relationship between the Italian state and its enterprises has nevertheless tones of ambiguity. It is especially unclear how the balance of power between the government and the enterprises plays out in this period. As previously mentioned, the neglect of industrial policy goals seems to have led to a growing independence of state-owned enterprises, especially after their listing on the capital market, which pushed them to pursuing market-oriented performances (Interview 49). This has made Italian state-owned enterprises increasingly similar to private corporations, and specifically among the largest Italian corporations. The privileged tie with the state remained nonetheless. Such a tie seems to have turned into a reciprocal agenda-setting role, whereby state and SOEs would bargain on reciprocal interests.

The fact that SOEs became increasingly able to own initiatives found particularly clear expression in the chemical sector. The Vinyls case showed a government attempting some forms of rescuing, while ENI refused to cooperate. However, there have also been cases where the connection between an enterprise and the state seems to have eased the task of the government, such as in the case of Piombino and RFI. These differences hint to the fact that different SOEs may carry different power positions vis-à-vis the state and thus have different extents of agenda-setting power.

CHAPTER VII

Sailing in troubled waters with no clear destination

The acceleration of the industrial crisis and the buildup of state financial instruments

The previous chapter narrated the transition from a gradual erosion of Italian industrial capacity to an accelerated deterioration in the years of the crisis, as an effect of the double hit of the financial and debt crisis. It is factually difficult to talk about an Italian “post-crisis period”, since in 2019 the real per-capita GDP was still 6% lower than it was in 2007 (World Bank, 2024). However, looking at the sectoral value added for the core sectors analysed here so far, developments appear more articulated.

As can be seen in Figure 62, the sector to suffer the most spectacular decline was the construction sector, whose decline was steeper and more prolonged compared to what seen in manufacturing. By 2015, the value added of the construction sector was almost 26% lower than in 2007 (ISTAT, 2024a). Conversely, the other manufacturing sectors underwent a gradual process of recovery, which nevertheless can overall be considered to be moderate and strongly concentrated towards the years of the pandemic counter-cyclical programs.

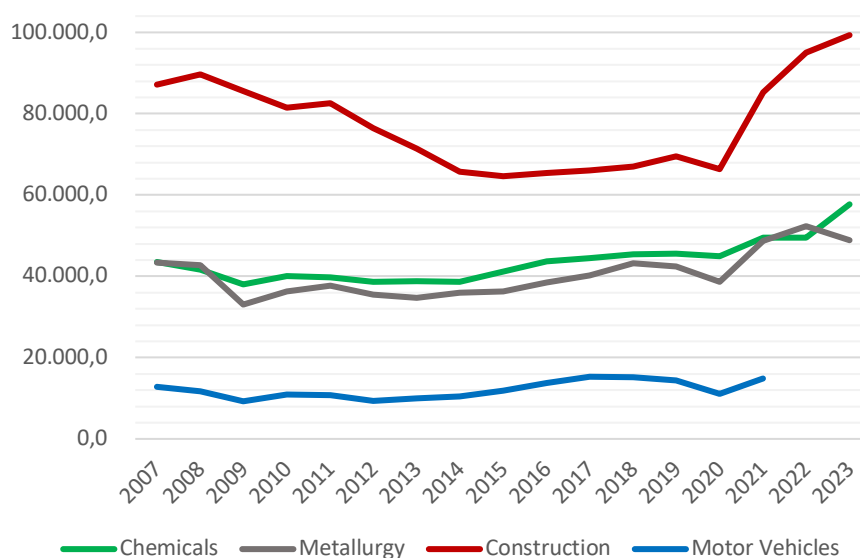


Figure 62 Value added by sector (mln, EUR) (ISTAT, 2024a)

Looking closer, Table 5 shows the percentual differences in value added between selected periods. It can be noticed that, by 2015, none of the analysed economic sectors in Italy had recovered from the financial and debt crisis. In some cases, like chemicals, metallurgy and construction, the values were between 20 and 30% lower. Extending the comparison of 2007 to the end of the post-crisis period

(2019)⁵² shows that, after 12 years, value added in Italian manufacturing grew by 3.8% only⁵³. By comparison, value added in German manufacturing grew, between 2008 and 2019, by 45% (Eurostat, 2024d). Moreover, by 2019, metallurgy, chemical products and construction still reported values being lower than 20% compared to the pre-crisis period.

Considering only the post-crisis period (2012-2019), excluding construction, there is a general growth in all the sectors of manufacturing, which managed to at least shrink the gap with 2007. Eventually, considering the whole timespan between 2007 and 2021 (a total of 14 years), it can be seen that the overall recovery from the crisis was modest at best. It can also be observed that the 2007-2019 data differ dramatically from the 2007-2021 ones, despite only two years of difference. This is the effect of the post-Covid pandemic programmes, which boosted economic growth dramatically, especially in the construction sector. In fact, it is easy to notice that the manufacturing sectors that present the most important differences, namely chemicals and metallurgy, are also those that are most strictly connected with the construction sector, while the difference in value added for motor vehicles is more modest. Therefore, the comparison between the 2007-2019 and the 2007-2021 series may hint to the fact that even the modest growth in value added from 2007 to 2021 may be biased due to the generous policy of demand stimulation for construction sector during the Covid crisis and in the two years afterwards.

	2007 / 2015	2007 / 2019	2012 / 2019	2007 / 2021
Chemicals, Pharma, Plastics, Rubber	-5,3%	4,8%	18,0%	13,6%
- Chemicals	-30,8%	-22,4%	14,1%	6,2%
Metallurgy and Metal products	-16,4%	-2,3%	19,5%	12,4%
- Metallurgy	-30,8%	-22,4%	14,1%	6,2%
Motor vehicles	-7,2%	11,4%	54,4%	15,6%
Manufacturing Total	-7,5%	3,8%	18,9%	9,8%
Construction	-25,9%	-20,3%	-9,2%	-2,2%

Table 5: Variation in the sectoral value added (own calculations, based on: ISTAT, 2024a)

Beyond being slow, the recovery was also highly inconsistent over time, alternating periods of slight growth with periods of slight stagnation or recession, thus further contributing to create a sense of overall decline that can be grasped also across the gathered interview material.

⁵² The years after 2019 deserve a separate consideration, in light of the large counter-cyclical programmes implemented during the pandemic, and to the disruptions due to the war of Russia against Ukraine.

⁵³ It is important to point out two aspects about using value added. One is that this measure detracts the inputs used by input costs (except of labour), thus avoiding that inflating intermediate goods may inflate values as it would happen by using only turnover data. The second, is that value added does not detract salaries, meaning that rising wages may lead to shrinking operating surpluses, which nevertheless is not the Italian case, since wages have seen a stagnant development.

A general reorientation that was accelerated by the crisis and that can be seen across sectors is a general pressure to internationalize, both by promoting exports and by recurring to offshoring, in order to better ensure deliveries to key customers and to access new markets (Interviews 70, 71).

7.1) The Italian automotive sector between internationalization and peripheralization

Internationalization was a core development in the automotive sector, where FIAT started an ambitious expansion project which began in 2014 with the merger between FIAT and the American manufacturer Chrysler, which gave birth to the FCA Group.

The post-crisis period factually overlapped with a further acceleration in the process of transformation of Italy from a car manufacturer to a manufacturer of intermediate products, which would later strengthen a series of dependencies and weaken the coordinating capacity of industrial policy for this field. Already in 2013, in Italy, the ratio between newly registered cars and newly produced cars was 30%, a particularly low level for a car manufacturing country (ANFIA, 2013e).

For the suppliers, internationalization meant serving new markets, both in terms of investing abroad and in terms of exporting. As the ANFIA president in 2012 stated:

“In a global context that continues to grow (...) remaining in Italy and in Western Europe does not pay and we necessarily need to reach higher growth markets.” (R. Vavassori in: ANFIA, 2012a)

However, differently from other car manufacturing countries, Italian suppliers seemed to see investment in China suspiciously, favouring rather Russia, Brazil and the US (ANFIA, 2012a; 2012b; 2013e).

The post-crisis period also saw some attempts by the suppliers to engage in coordination with the government, although such attempts were in fits-and-starts, rather than systematic.

In December 2012, ANFIA started a task force with the MISE in order to bring to the table the problems of the sector. The ANFIA president Vavassori also called for the constitution of an “Automotive Council” (*Consulta del Settore Automotive*) with the purpose of creating a concertation instrument with which to devise new legislation and to monitor commitments (ANFIA, 2012a). Among the goals of the council, there should have been the attraction of foreign investment, favouring the dimensional growth of companies, aid internationalization, and the development of technological roadmaps for low-emission vehicles (ANFIA, 2012b). The Automotive Council was established in October 2013 at the MISE (ANFIA, 2013c; 2013d). The results of this form of consultation are far from clear, as the role of this

Council was not discussed in the years afterwards and was not mentioned in any of the interviews I conducted or the documents I consulted.

However, the industry put forward a series of clear demands, which went across a series of themes. To begin with, a policy of demand stimulation was requested, through subsidies and tax incentivization, until the market would reach the pre-crisis levels (ANFIA, 2012b). In this respect, the industry took issue with a series of measures implemented by the technocratic government in order to reduce budget deficits. In particular, the cancellation of the deductibility of the price of business cars removed an incentive from an important segment of the market (ANFIA, 2013e). Furthermore, ANFIA demanded a derogation to the Stability and Growth Pact for investments aimed at replacing busses for local transportation (ANFIA, 2012a; 2012b). Moreover, the increase in the tax on car ownership (*sovrattassa sul bollo*) was also criticized (ANFIA, 2013b)

Another important issue was related to electricity prices, which made up a big competitive disadvantage for Italian manufacturers, faced with costs that were, on average, 40% higher than their European counterparts (ANFIA, 2012a; Nervo, 2015). For this reason, the industry requested a reduction of at least 80% of the A3 entry of the energy price taxation, namely the component dedicated to the financing of the renewable energy capacity (ANFIA, 2013a; 2013e; 2015a).

Compared to the pre-crisis period, during this time the industry also raised more clearly the need for supporting instruments for access to credit and for aiding internationalization. In this respect, ICE, SACE and SIMEST are mentioned as useful instruments to support the process of internationalization (ANFIA, 2012b; 2014). The halt of the payments of the public administration to suppliers, especially in the bus sector, was also considered to have been a source of concern and of liquidity crunch (ANFIA, 2012a; 2012b)

In the field of R&D, the industry demanded the introduction of a structural tax credit, rather than the usual fixed-term programmes, which did not help investment planning for R&D. This situation is compared to France, which placed 5 billion euros in R&D, while Italy only 200 million (ANFIA, 2012a; 2013e; 2014; Confartigianato Trasporti, 2015).

In the field, of the transition to more eco-friendly mobility, the car industry also took a stance in favour of natural gas-powered cars more decisively than before (Confartigianato Trasporti, 2015; Nervo, 2015; 2016)

Further issues raised concerned labour market rigidity, the lack of an adequate logistic infrastructure, and outdated machinery equipment of Italian companies (ANFIA, 2013e; Nervo, 2015).

The governments alternating between 2012 and the beginning of 2014 did not provide too much to the industry. This seems to have been both an effect of the ideological orientation of these governments, who saw industrial policy suspiciously, and an effect of the consolidation efforts in terms of budget.

The Monti government conceded a revision of “Article 39” on energy taxation, which freed 10 million euros for the whole supplier system, which was considered “a signal” (ANFIA, 2013e). Moreover, 100 million were placed to the modernization of the local transport system for 2014-2016, which was an important measure for the declining bus industry. Eventually, a “Motor vehicles investment fund” was established, with 34 million euros. (ANFIA, 2013e)

The year 2014 marked a reverse in the declining and pessimistic tendencies in the sector, which started seeing signs of recovery (ANFIA, 2018). To some observers, 2014 factually looked like a year that would mark discontinuity in the previous plans of FCA of abandoning Italy as a production location.

In fact, FCA outlined an industrial plan intended to increase the exploitation of the productive capacity of the Italian and European plants, which stood at 53% and 66% respectively, to 100% by 2018 (Il Sole 24 Ore, 2014). The plan also included the production of the FCA brand Jeep in the Melfi plant in Italy, with the goal of producing 400 thousand vehicles per year.

The plan came with real effects and the number of the yearly produced vehicles by the FCA Group in Italy saw a sharp increase in the years immediately after 2014. The number of the FCA produced vehicles in the 2014-2018 period was 73% higher than in the years 2010-2013. Considering a world growth in the produced passenger cars of 5.3% between 2014 and 2018, this was definitely considerable.

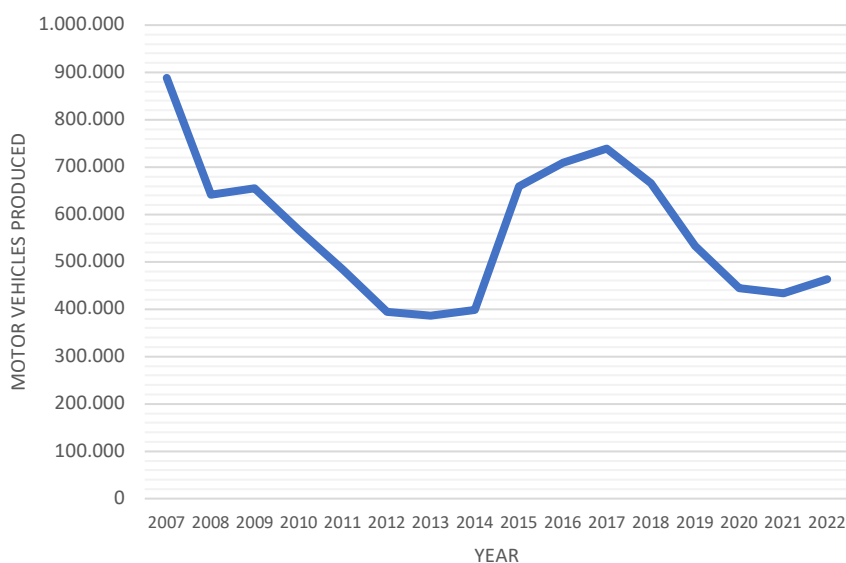


Figure 63 Motor vehicles produced by FCA Group in Italian plants (2007-2022) (ANFIA, 2024c)

This increase in FCA commitments to the country slightly reversed the declining trend of suppliers' dependence on FCA, which reached its historical low of 29% in 2014, and raised to 42% in 2015, thereafter fluctuating between 28 and 42% until 2017 (ANFIA, 2016).

However, seen in perspective, this change is far from impressive. In fact, suppliers already depended on FIAT for 42% in 2012. Therefore, the new FCA investment maintained a level of dependence of the supply chain at its 2012 level for a longer time, while the share of other OEMs remained steadily above 55% in the post-crisis period. As shown in Figure 64, the pre-crisis levels of dependence on FIAT were never again to be reached. Among foreign markets, and thus foreign OEMs, the main export market was Germany, accounting for roughly 20% of total exports (ANFIA, 2016; Nervo, 2015).

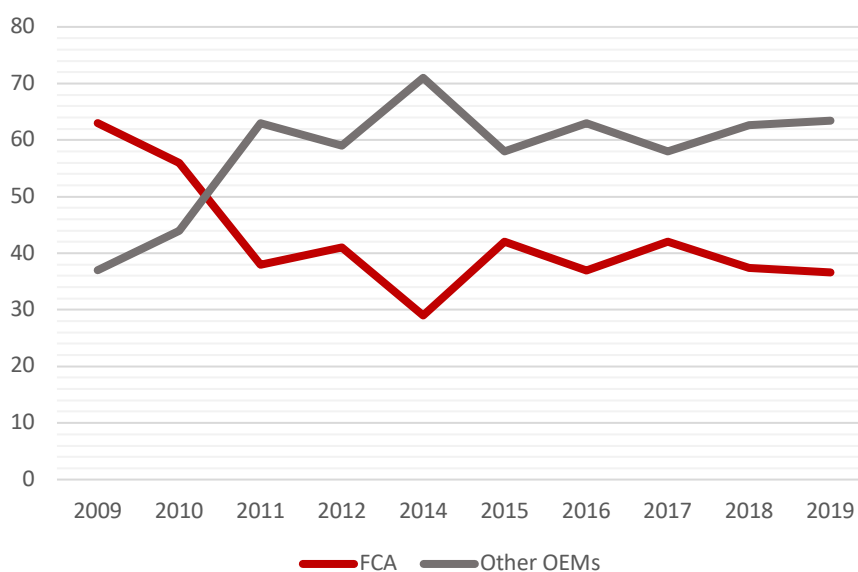


Figure 64 Percentage of Suppliers' Revenues dependent on the FCA Group (ANFIA Annual Observatory, 2013-2020)

The introduction of the new industrial plan by FCA overlapped with the return of a political government in office. In fact, the Renzi government (2014-2016) set a short but significant period of change in the interaction between the government and FCA, and marked a stronger strategic focus of the government on automotive, with an openness of the company to engage in dialogue (Interview 49). The suppliers' business organization also applauded the FCA decision to produce the FIAT 500X and Jeep Renegade models in Italy (Nervo, 2015).

The focus on automotive seems to be confirmed by the written statements and the praise the industry gave to the new course. In 2015, ANFIA could declare satisfaction with the "renewed interest of politics towards the sector" (ANFIA, 2015a).

The former president Vavassori stated that “*we have today the government and a good part of politics who understand the centrality of businesses and manufacturing for the sustainable growth of our country (...) it would be wrong and counterproductive to repeat the usual Greek chorus of complaints*” (...) *We have become an authoritative interlocutor and we are consulted in the various institutional and technical offices, both Italian and international*” (Vavassori, 2015).

The newly elected president Nervo also confirmed that “[w]e value how much the institutions are doing to strengthen these competitiveness factors, also through the strategies of support to export and internationalization put in place by the MISE” (Nervo, 2015).

The industry also expressed satisfaction with the government on a series of measures that, at least partially, reflected some of the demands of the industry in the early phase of this period. To begin with, measures of tax incentivization to support new investment in machinery, and the related extension to commercial vehicles, were praised (the *Nuova Sabatini Law*), together with the increase in the level of tax deductibility of company cars and machinery (*iperammortamento*) (Nervo, 2015; 2016). Moreover, the decision to allocate 15 million euros for a sectoral fund was well received (ANFIA, 2015b). From the point of R&D, a positive development was considered the introduction of “automatic” incentives to support patented technology and protected brands (Nervo, 2015). In the field of access to credit, the extension of the competences of the *Fondo di Garanzia* for the financial operations referred to companies and consortia belonging to the automotive and transportation industries was also mentioned as an important step (ANFIA, 2015b; Nervo, 2015). Eventually, the industry remarked the importance of the strategy of export and internationalization promoted by the government through the ICE agency (Nervo, 2015).

Therefore, the years of the Renzi government saw an overall improvement of the relationship between the industry and the government.

These years between 2014 and 2016 also coincided with the recovery of automotive suppliers of the value added of the pre-crisis period, as can be seen in the figures on value added above and as confirmed by further indicators (ANFIA, 2018).

It is not the purpose of this chapter to understand the extent to which this temporary recovery was influenced by the policies adopted by the Renzi government. However, a first assessment would rather make guess that such influence was negligible. Looking at the trend of gross fixed investment in automotive (Figure 65), it can be seen that, in 2015, the year after the introduction of the “Nuova Sabbatini”, the volume of investments increased back to its 2013 period. The positive trend seems more likely to be explained as an effect of the FCA industrial plan, whose practical implementation led to rising production volumes in 2015. The plan was presented in the middle of 2014, just 3 months after

the Renzi government took office, making it unlikely that this may have been an effect of a bargaining process with the government.

The relatively moderate importance of the Sabbatini law in boosting investment can also be noticed by the fact that gross fixed investment started falling again in 2017 and continued in the next years, despite the Nuova Sabbatini was kept in place.

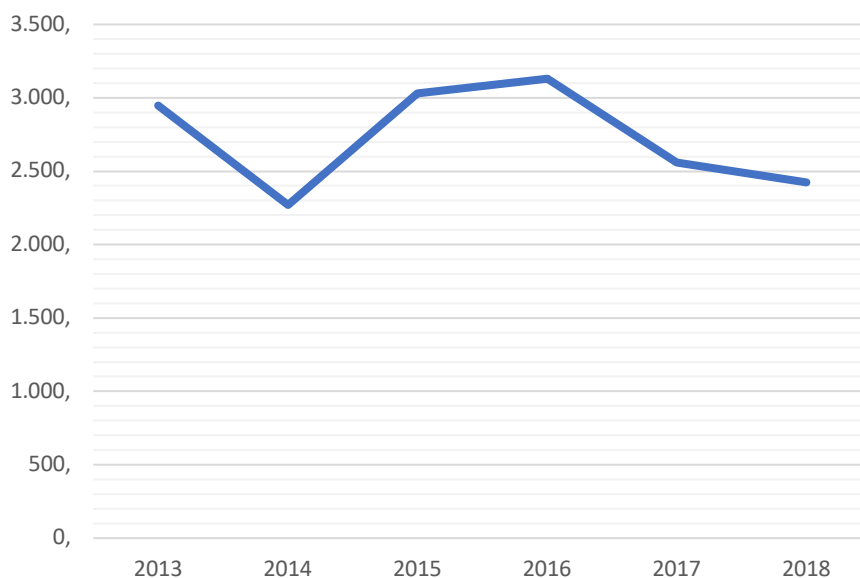


Figure 65 Gross fixed investment of Italian automotive companies (mln, EUR) (Eurostat, 2024e)

What is relevant here is that the period of the Renzi government seemed to have coincided with a period of re-found coordination between the automotive industry as a whole and the government.

The enthusiasm started to vanish when the 2016 constitutional referendum was threatening to put an end to the experience of the Renzi government.

In occasion of the public assembly of november 2016, president Nervo argued about the need for “[a] stable and competitive legislation... I think that especially in the current political situation it should be fundamental to give continuity to our companies” (Nervo, 2016).

One month later, the government fell due to the defeat in the constitutional referendum. The subsequent Gentiloni government, more concerned with budget rigor than his predecessor, began a recalibration of those policies, and in particular expressed the intention to reduce funds for motor transport incentivization (ANFIA, 2017). However, the government only partially reduced the incentives set by the Renzi government, maintaining the main innovations intact. The Gentiloni government also established a “Fund for intangible capital”, which was aimed at attracting investment in innovative

technologies and would be endowed with a total of 1.3 billion euros over the years 2018-2022 (Nervo, 2017; *Il Sole 24 Ore*, 2017c). Documents or mentions of such funds are difficult to be found currently, making it likely that the project was discontinued immediately afterwards, especially after the end of the Gentiloni government.

To a certain extent, it seems that FCA interpreted the fall of the Renzi government as giving them a free hand on the agreements in place.

Despite by 2017 FCA revenues had raised by 31% and net profits by 53% compared to 2013, the number of passenger cars produced in Italy by the company started falling again in 2018 (FCA, 2017; ANFIA, 2024a). This despite the fact that the new industrial plan 2018-2022 promised 5 billion investment in Italy and the reshoring of two car models from Poland and Mexico (*Il Foglio*, 2018). The 2018 industrial plan also announced the choice towards electrification of FCA, motivated by new regulation, and announced possible occupational consequences due to the reduction in the number of components needed for a car from 900 to 100.

It may be eventually useful to spend a few words on how the trade balance for automotive developed in this period. As can be seen in Figure 66 and 67, the crisis determined a steep improvement in the trade balance for passenger cars, overwhelmingly due to a steep fall in imports, but also to a steep rise in exports, part of which can be attributed to the increased investment in assembled vehicles during those years.

The situation looks different and more complicated when analysing intermediate parts. In fact, the trade balance in this segment has remained positive but at gradually decreasing levels. Moreover, Figure 67 shows that the export revenues from intermediate parts have fluctuated but generally remained below the 2007 levels. Considering that, as seen before, the FIAT weight on the total suppliers' revenues did not change much after the crisis (thus phasing out the idea that exports would drop for a rising domestic use of intermediate parts), it seems safe to observe that suppliers reacted to the crisis by internationalizing, but that this internationalization came to a limit after which it was not possible anymore to grow out of exports. This internationalization has also led especially the largest part suppliers to increasingly invest in plants abroad. This investment behaviour responded to two needs. First is of a practical kind, namely that some products are heavy and with low individual margins, meaning that the profits are too low in relation to transportation costs (Interview 71). Secondly, this reflects the tendency by especially Tier-1 suppliers to place the plants close to their main customers, namely the OEMs, in order to provide them better flexibility (Interviews 70, 71).

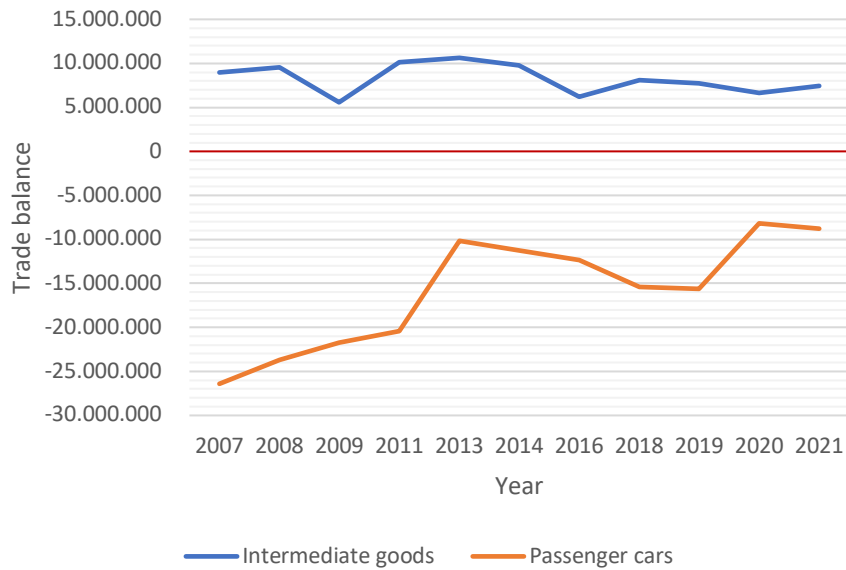


Figure 66 Automotive trade balance (thousand, EUR) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

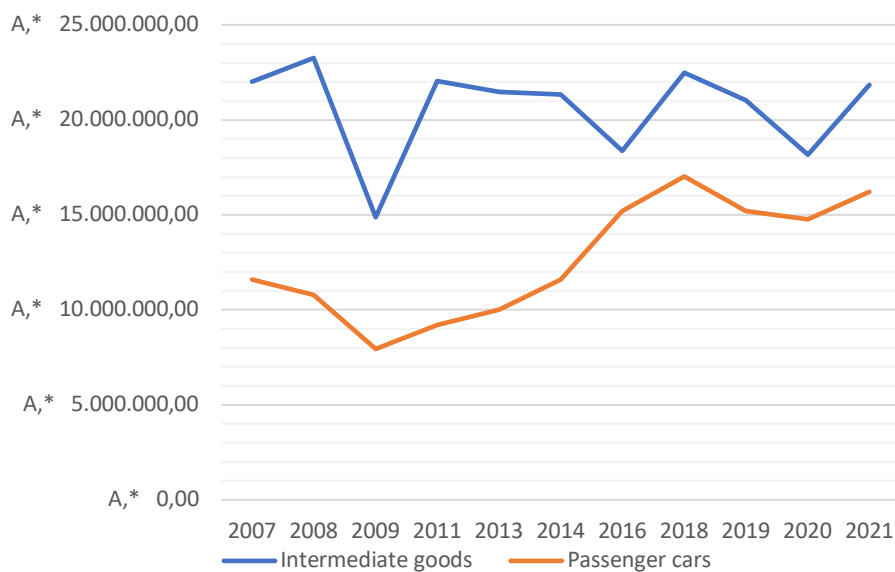


Figure 67 Automotive exports (thousand, EUR) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

It will be pointed out in the next chapter how the death of the former FCA CEO Marchionne and the merger between FCA and PSA into Stellantis led to a further detachment of the FCA-system from the Italian car manufacturing system, with a consequent further loss of coordination in the sector and to the surrendering, also by policymakers, to the reality of Italy becoming a supplier of intermediate parts, rather than a producer of final products. According to sources familiar with this period, the relationships

with the government and FCA during the last phase of Marchionne administration were generally not conflictual and “reasonable” and the company showed availability to bargain (Interview 49).

In fact, interview data points to a qualitative change in the relationship between the government and FCA after the death of the FIAT CEO, and the suppliers also expressed strong concerns regarding the related perspectives (Interview 49; ANFIA, 2018).

This brief story of post-crisis automotive has shown the weakness of Italian governments in interfacing with FCA. A good part of the “success” that the government obtained in persuading the carmaker was due to a strong weakening of labour legislation and to a politics of horizontal incentivization which nevertheless benefited industrial companies in particular. Conversely, the guarantees given proved not to last more than a few years.

7.2) Italian steelmaking in the high waters of the crisis

The decline of automotive also parallels an even more dramatic decline of Italian steelmaking, which heavily depended from the orders of automotive (for around 9%) and the construction sector (Federacciai, 2014). The very weak performance, due to the contractionary effects of the Italian industrial and budget crises carried definitely a role not only, and perhaps not so much, on the volumes produced, but rather on the levels of profitability and the revenues of the sector.

To begin with, revenues for the whole basic metals and steel sector were stagnant and managed to reach the 2007 level again only in 2021 (Figure 68), presumably as an effect of the booming construction sector and post-pandemic peak in demand. Although Federacciai data provides higher absolute figures for the revenues, the tendency remains fundamentally the same: five consecutive years of drop in revenues (2012-2016) with moderate growth starting from 2017. (Federacciai, 2019).

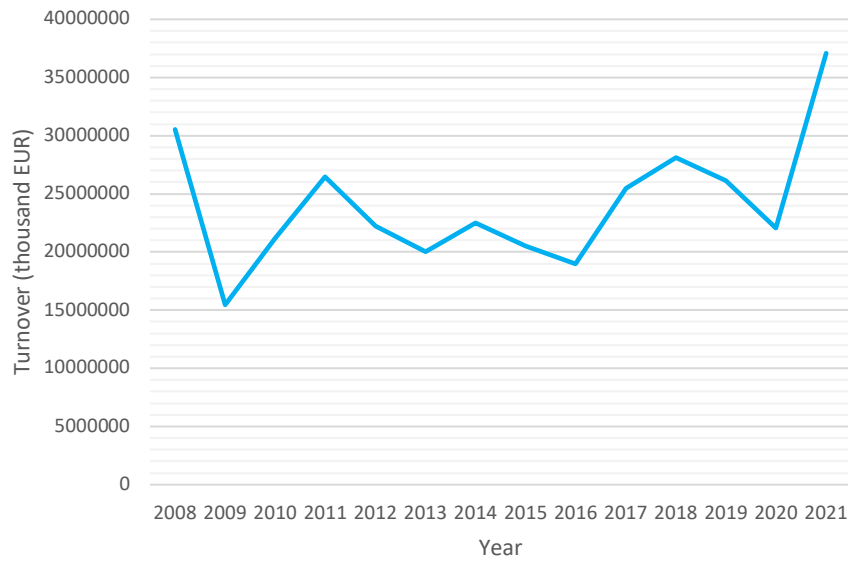


Figure 68 Turnover for Basic metals, iron, steel and ferro-alloys (thousand, EUR) (ISTAT, 2024b)

Moreover, differently from other manufacturing sectors, steelmaking did not manage to find in the export market an alternative to a stagnant domestic market, as can be seen in the stagnant export revenues which, again, fail to reach their 2007 levels (Figure 69). Therefore, the trade balance of the sector factually improved (Figure 70), although this was not due to a boost in exports, but rather to an extremely low internal demand. As a marginal note, it should also be pointed out that a repositioning of Italy as a steel producing country seems to have taken place over time, whereby Italy lost importance in the integrated and more complex steelmaking process, and increasingly focused on the (lower value added) activities of simple productive cycles, such as the electric oven and the “long products” (Gozzi, 2016), which are predominantly used in the construction industry.

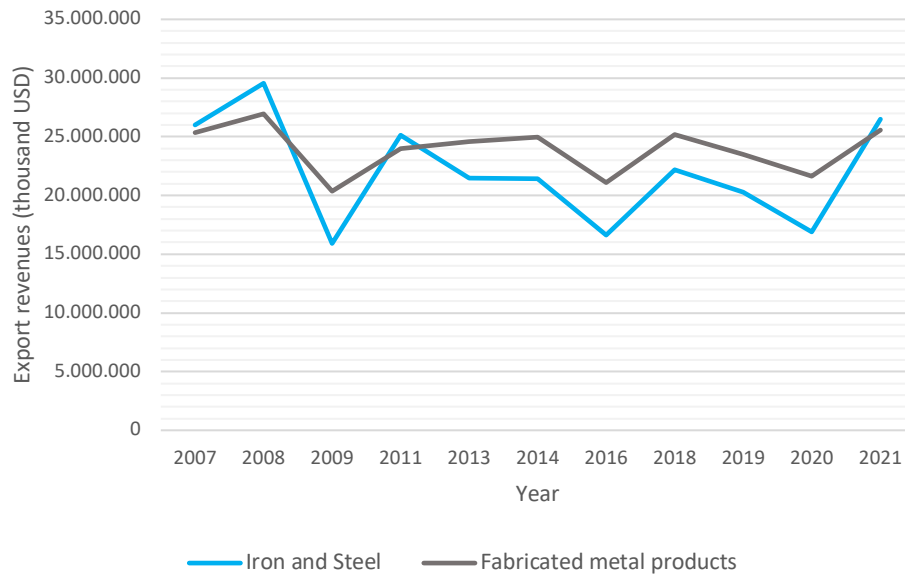


Figure 69 Export revenues from Steel and Metal Products (thousand, USD) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

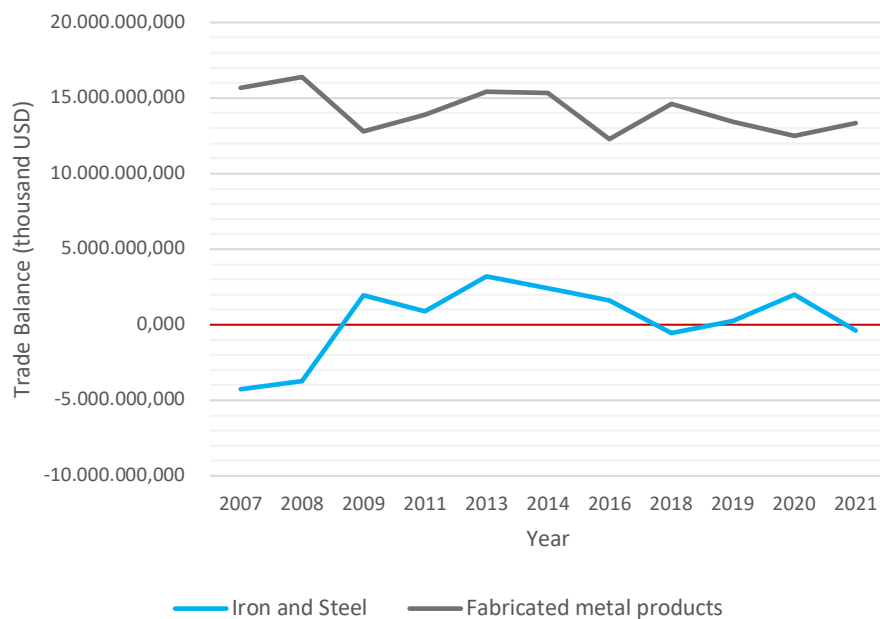


Figure 70 Trade Balance in Metallurgy (thousand, USD) (own calculations based on: OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

The critical situation of the steel industry was not unique to Italian steelmaking, but was also an effect of a structural crisis of overcapacity of the sector, especially since Chinese overcapacity flooded the market with cheap steel and, by 2018, more than half of the world steel was produced in China (Federacciai, 2019).

Therefore, much of the advocacy effort undertaken by the steelmaking employer association Federacciai was, in this period, focused on a defensive battle against further liberalization of trading rules. In particular, the association strongly intervened and mobilized effort to counter the admission of China into the definition of a “market economy”, as well as to apply stricter Trade Defence Instruments (TDI) against the dumping from Chinese imports. The idea of admitting China to the status of a market economy found, back then, supporters in the Commission and among some member states. It is interesting here to notice that a geographical “[p]olarization emerged between those who (first among the others the Nordic member states) do not want high tariffs to be applied to Chinese imports (...) and those member states closer to the concerns of manufacturing interests” (Federacciai, 2017: p. 53).

Beyond the general condition of overcapacity, the industry was also hit by a European regulation wave regarding environmental standards and energy pricing. Since in Italy energy prices were already high compared to the major European competitors, new regulations could further worsen the competitive disadvantage of domestic steelmakers. A particularly pressing issue was the Emission Trading System (ETS) which, as seen, also caused great concern in Germany. In particular, the regulation by the Commission left to the member states the task to implement compensatory measures for energy intensive sectors.

The ETS issue provides particularly interesting insights at least in two respects. In the first place, it can be seen that the Italian steel industry did not manage to obtain the creation of a compensation system for the extra ETS costs, differently from other competitors like Germany and France (Federacciai, 2017; 2019). The reasons for this failure are unclear, since the industry, although decrying the lack of industrial policy in the country (Federacciai, 2014), in several instances also claimed a satisfactory level of support of the Italian government for the European-level issues. The only reason mentioned in the documents is the limits to the public budget which seemed to have influenced the government decision not to create such fund (Federacciai, 2017). This explanation looks even more likely if the volumes of Italian steel production are considered (which implies higher electricity and thus reimbursement costs), since the country was the second steel producers of Europe with a share always fluctuating between 13.3% and 14.6% of the total European production (Federacciai, 2014; 2015; 2016; 2017; 2018; 2019).

The second reason for which this issue is of interest is that it polarized European steel policy again between different fields. Italian steelmakers proposed a harmonized and centralized system of ETS compensation with standard rules equal for all countries and possibly financed by a central fund. This proposal found strong support in the European Parliament, which overwhelmingly voted in favour. However, the proposal was eventually dropped for “[t]he opposition of several member states, primarily those with regulations that already foresee the use of state aid for the financial compensation of indirect ETS costs (Germany, Netherlands, Belgium, Finland, France, Greece, Spain)” (Federacciai, 2018).

These two central issues show that, despite finding support by the Italian government in the international arena, the steelmaking industry resulted eventually defeated, since the state refused to provide a buffer to the costs of ETS. Government support to the energy prices issue seemed to be limited to brokering a deal between a consortium of steelmakers and the state-owned electricity grid enterprise Terna for the construction of an “interconnector” at the French border.

When considering steelmaking, moreover, it is particularly evident how the connection with other sectoral policies remarkably impacted the sector. In several instances the president of Federacciai associated the stalemate in relaunching the sector to the crisis condition in the construction sector

Furthermore, the Federacciai president repeatedly solicited the government to implement a policy less centred on budget rigor and more of infrastructure investment, also in order to relaunch the construction sector, which is critical to the steelmaking industry (La Repubblica, 2014a; Il Sole 24 Ore, 2017b). The Federacciai president would comment that “[a] large industrial country cannot live only out of exports: there is a great delay in infrastructure investment” (Gozzi, quoted in: Il Sole 24 Ore, 2017b).

Discussing about the lack of growth in the segment of the steelmaking sector related to infrastructure development, Gozzi stated: *“There is a need to stimulate this sector with infrastructure policies and a fiscal compact that allows financing them through debt; otherwise, there is a risk of a divide, with sectors advancing along the path of modernization and others falling behind because they cannot invest. This is the opposite of the principle of convergence.”* (Gozzi in: Il Sole 24 Ore, 2017d)

7.2.1) Giants of steel: the politics of vertical intervention in steelmaking

The governments alternating between 2012 and 2018 continued the intervention in crisis situations to shield the largest plants from the consequences of the financial crisis.

The assets of the previously mentioned Lucchini were split and sold to different bidders, with the Piombino plant remaining the only really problematic situation where the *amministrazione straordinaria* continued. For instance, the Lucchini plant in Lecco was sold to Caleotto Spa, a joint venture between two Italian large steelmaking players (Caleotto, 2015). It seems that overall, Italian steelmakers took the parts of Lucchini that were more convenient for their business, and tried to have a say on the other crisis situations the government was trying to address, but without setting up an action plan with the government that would involve a role for them in it.

The government tried to sell the Piombino plant in a competitive bid in 2014. The two main competitors for the bid were Klesch and a consortium of steelmakers including the Italian steelmaking companies

Feralpi, Acciaierie Venete, and Duferco, the latter of which was owned by the Federacciai president Antonio Gozzi. The consortium of Italian producers nevertheless withdrew from the bid when a third competitor, the Tunisian fund SMC, offered a wide investment plan to keep the blast furnace operational, with the connected occupational benefits. The plan was scrapped when the Tunisian fund failed to deliver the financial guarantees required by the MISE to finalize the agreement and for considering the interlocutor “unreliable” (Lucchini, 2016).

At the end of 2014, the Algerian group Cevital made a binding offer to acquire the Piombino plant, maintaining the occupational levels by relaunching the hot-rolled steel production (Il Manifesto, 2014a; Il Tirreno, 2014a).

Gozzi argued that the investment of the Cevital group introduced in the Italian steelmaking system a dangerous competitor in the field of steel from electric ovens, and that it risked to threaten the whole electric steelmaking system of Northern Italy (Il Manifesto, 2014b; Il Tirreno, 2014b; Il Corriere Etrusco, 2014). Conversely, the association welcomed the offer from the Indian steelmaker Jsw, which nevertheless have implied 1.500 dismissals (Il Manifesto, 2014b). This would be only one of a series of declarations by Gozzi, who did not make mystery of his idea that the closure of the Piombino blast furnace would be “inevitable” (La Repubblica, 2014a).

The intervention of Gozzi was strongly criticized by trade unions, local politicians and even by the vice-minister to economic development Claudio de Vincenti, who argued that “[n]o one, absolutely no one, should dare to interfere in any way in this process” (De Vincenti quoted in: AGI, 2014).

Trade unions argued that the Italian steelmaking association was retrenched in a protectionist mindset (FIM-CISL, 2014a). Moreover, the three metalworkers’ trade unions and the Toscana region considered to file a lawsuit against Gozzi for “bid rigging”. In particular, the president of the region accused Gozzi to be trying to boycott the Cevital bid because this would put under competitive pressure his own electric oven production (CGIL Toscana, 2014; FIM-CISL, 2014b). Particularly interesting is also that, in 2017, the AGCOM decided sanctions against some Italian steelmakers, with the accusation of creating a cartel in the production of reinforcing bars for reinforced concrete, which was a product that Cevital planned to produce in the Piombino plant (European Commission, 2019; AGCOM, 2017)

The Cevital agreement was thus eventually finalized against the will of the industry. However, the Cevital management did not comply with the industrial plan they committed to, leading to calls to the government and local institutions to ensure that agreements would be respected (FIM, FIOM, UILM, 2015a; 2015b). In 2017, the government prolonged the regime of *amministrazione straordinaria* and solicited Cevital to find an industrial partner with whom to implement the plan for which they committed (Il Sole 24 Ore, 2017c).

Further contrasts between the government and the Federacciai president arose on perhaps the most controversial steelmaking case, namely the ILVA plant in Taranto. The ILVA plant, previously IRI property and then privatized in the 1990s, was owned by the steelmaking giant Riva Group Spa. Beyond the crisis and sectoral situation, the main problems concerning ILVA were the scandals on the environmental impact of the steelmaking plant for the area of Taranto, and especially for the particularly high prevalence of cancer that was presumably due to the effect of the plant emissions.

Differently from the Lucchini case, the ILVA case mobilized substantial state financial resources, also because the sheer size of the plant, one of the largest in Europe, made the issue highly salient in the political debate.

In 2012, ILVA thus signed a memorandum of understanding with the region and the MISE regarding the industrial conversion, where the MISE and other ministries made available 165.2 million euros out of the 336.7 million needed (Repubblica Italiana, 2012). Subsequently, the legal issues regarding the pollution scandal and the fraudulent behaviour of the Riva family, its main shareholder, led, in 2014 to halting part of the production and the seizure of part of the plant (La Stampa, 2019; La Repubblica, 2015a; La Repubblica, 2016a). The government then put the company under a special government surveillance regime in 2013, which then would turn into *amministrazione straordinaria* in 2015.

Gozzi claimed that the MISE management of the plant was leading to bankruptcy and that the new Renzi government should intervene, finding again a decisive reply by the MISE stating that Italian steelmakers should put more skin into the game (Reuters, 2014). Gozzi went on claiming that the commercial conduct of the MISE created serious disturbances in the market, since the hot coils were being sold to extremely low prices just to cash in some liquidity.

The Renzi government attempted to make some financial resources available for the period needed to find a new investor which would invest into the environmental conversion of the plant while also keeping the occupational levels.

The first measure implied a concession to the government administration of ILVA to take loans up to 400 million covered by a state guarantee, which could go as high as 800 million upon government agreement⁵⁴. The second measure was a 300 million euros loan directly accorded to ILVA in order to allow the temporary continuation of the activities⁵⁵ (Il Fatto Quotidiano, 2015a). After the state guarantee was awarded, the Cassa Depositi e Prestiti agreed to disburse a 330 million euros loan to ILVA, while Intesa San Paolo disbursed 50 million (Camera dei Deputati, 2017). A third measure was the favouring of a settlement between Fintecna and ILVA for a previous contentious, through which Fintecna would reimburse ILVA with 150 million euros (CDP, 2015c). This latter measures was

⁵⁴ Legge 28 dicembre 2015, n. 208.

⁵⁵ Decreto-Legge n. 191/2015, comma 3.

considered as state support for instance by the German organization of steelmakers WV Stahl, who argued that the arrangement was exceedingly unfavourable to Fintecna and that a market player would not have accepted such disadvantageous conditions (European Commission, 2017).

Upon a lawsuit from “*two competitors who do not want their identity to be known*” (European Commission, 2017: p. 1) and the German association of steelmakers WV Stahl, the European Commission took action to evaluate whether the several support measures to ILVA were to be considered as cases of state aid. The final verdict evaluated the 300 million loan and the 400 million guarantees as state aid to be reimbursed to the state by ILVA, while the Fintecna settlement was not considered as such (European Commission, 2017).

Meanwhile, in 2016 the government managed to get two consortia as bidders for the ILVA plant. On the one hand, there was a consortium led by Arcelor Mittal, with the participation of the Intesa San Paolo bank and the Marcegaglia steelmaking group. On the other hand, the AcciaItalia consortium made up of the Indian steelmaker Jindal Steel, Italian large steelmaker Arvedi and the state bank CDP, which held a 44 % stake in the consortium (European Commission, 2019).

The participation of CDP to a competing consortium looks puzzling, especially considering that the commissioners appointed by the MISE gave suggestion to the minister Calenda to accept the bid of the Arcelor Mittal consortium. Even more puzzling is the fact that Arcelor Mittal offered to CDP to join its consortium, obtaining a rejection of CDP, apparently on the ground that the offer was outside of the general government orientation of having a majority of domestic owners (Il Messaggero, 2017)

However, this apparent contradiction is quickly explained by the fact that the offer from AcciaItalia became more competitive than ArcelorMittal only after a AcciaItalia relaunched with a 600 million euros higher offer which also envisioned higher occupational levels than those granted by Arcelor. To this “rebid”, CDP and Arvedi refused to participate for unclear reasons beyond “the respect due to the government considering the complex institutional situation” (La Stampa, 2017; Il Fatto Quotidiano, 2019)

MISE minister Calenda accepted the offer of the Arcelor Mittal consortium, by stating that AcciaItalia rebid on the offer too late and the withdrawing of CDP and Arvedi from the consortium violated the rules of the public bid (Il Fatto Quotidiano, 2019; La Stampa, 2019). In reality, postponing and intervening on the law or re-open the bid would have been options which nevertheless were not considered. This despite the fact that leaked information showed that the technical committees were highly critical of the Arcelor Mittal bid, showing a discrepancy between the stated intentions of the company and the factual production volumes, profitability and business strategy that could be obtained with that programme (Il Fatto Quotidiano, 2017). Among the other factors, it seemed controversial the dependence of the ILVA plant on another (formerly competing) Arcelor Mittal plant in Marseille, which

would have violated the promises regarding the “independence” of the ILVA plant. The whole process thus ended up being highly opaque, and it still seems controversial that among the Arcelor Mittal co-bidders there was the ENI manager Emma Marcegaglia, who was also co-manager of the steelmaking business Marcegaglia Group.

The material at hand and the interviews conducted did not lead me to any conclusion regarding the reason for the final selection of the bidder. It appears nevertheless possible to speculate that the CDP participation to AcciaItalia could have been part of an idea to carry some leverage so that the Arcelor Mittal consortium would not lower the conditions for the ILVA investment.

On the ILVA case there were also frequent interventions of Federacciai through the voice of the president Gozzi, who vehemently criticized the type of intervention in ILVA, stating that the state-appointed commissaries were responsible for the catastrophic financial situation of the plant, which needed a higher skilled management and more funding for maintenance (La Repubblica, 2016c; Gozzi, 2016)

However, Gozzi also took a position in favour of state intervention in the case considering the conjunctural period of crisis and considering its nature of strategic asset. The Federacciai president thus advocated for a rescuing and investment plan of the state in order to favour the environmental viability of the plant (Il Secolo XIX, 2016; Gozzi, 2016). The president also expressed positively about the CDP role and a stronger state intervention considering the contingencies of the period (Gozzi, 2016). It was nevertheless clear that the Federacciai president was remarkably unsatisfied by the way the ILVA situation was managed.

This story of the general policy choices concerning the steelmaking sector makes particularly evident how the industrial policy lines of the government were plagued with contradictions. To begin with, it seems that a real and encompassing industrial policy for the sector was missing, also because such kind of industrial policy would have required resources that the state was not eager to employ. The ILVA case was already “expensive” in itself, the sector was generally weak and in a precarious competitive position. A relaunch of the sector would have gone through the strengthening of the construction sector, and especially the public infrastructure segment of it, which would have meant higher public expenditure.

Considering the general approach and the fact that ILVA was a major employer of the Taranto area and the largest steelmaking plant in Europe, in older times producing 30% of the total Italian steel production, ILVA was more of a “too big to fail” case than born out of an idea of relaunching a strategic economic sector. The government was factually not excessively attentive to the bidders’ quality and attempted to solve the issue without too much involvement. It is also possible to see in this way the withdrawal of CDP from the bidding. In this respect, the ILVA strategy looks much more like a cheap

version the state subsidization of the steelmaking sector during the later phase of the IRI, rather than an attempt to revive a plan for steel like in the earlier years of the IRI.

What strikes is nevertheless the disconnection and even conflictual attitude between government and the main employer association⁵⁶, with the only exception regarding the issues to be addressed at the European level. It emerges at several points how the several governments have found steel corporate players more as an obstacle rather than an asset for relaunching the sector.

7.3) The Dark Age of the Italian construction sector

Part of the Italian steelmaking crisis was attributed to the specific brutality of the crisis that hit the construction sector especially since 2011 (Interview 54). The Italian construction sector has been considerably more dependent on internal demand, which has turned into a vulnerability after the crisis period of 2009-2011 began. This reliance on internal demand also appears to have made the sector think in terms of “system” and led to strong advocacy efforts vis-à-vis the government.

Particularly in the Italian case, the roots of the long crisis of the construction sector were considered to lie especially in the halt of public works. The steep reduction in the “calls for tenders” (*bandi di gara*), especially at the municipal level, is considered to be perhaps the most pressing issue plaguing the Italian construction sector since the financial and debt crises (Interview 54). As can be seen from figure 71, the decline in the volume of public calls for tenders was steep and it amounted, at its deepest low, at around – 42% in 2013 as compared to 2008. The post-2013 fluctuations did not lead to a decisive recovery. Such a discontinuity in public demand triggered the collapse of the sector and a steep reduction in the number of enterprises (Interviews 54, 55).

⁵⁶ As a side note, it is useful to point out that Federacciai represents more than 90% of the steelmaking employers, making it highly representative of the sector

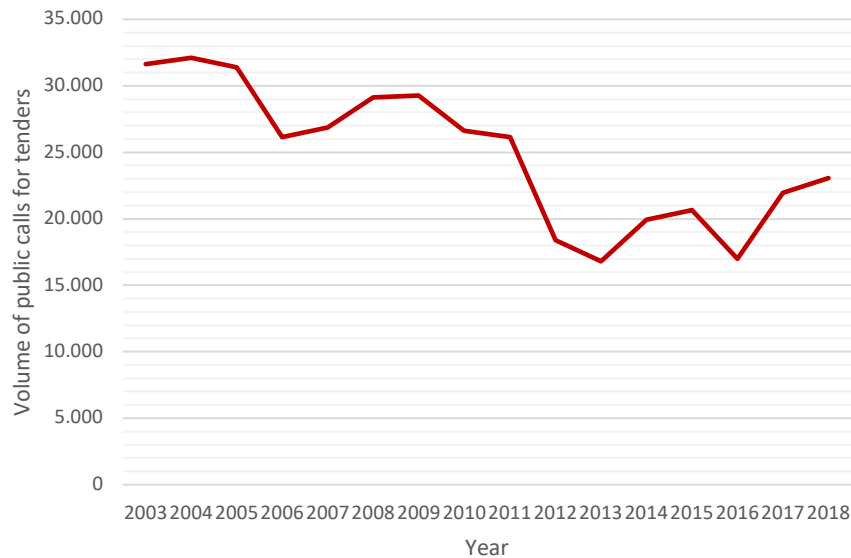


Figure 71 Volume of yearly call for tenders for public works (mln, EUR, 2015 prices) (ANCE, 2019)

Between 2008 and 2018, the construction sector enterprise population dropped by 137 thousand, namely -21.7%. Moreover, it was especially companies with more than 50 employees and those between 10 and 49 employees to suffer from the crisis, losing respectively – 22.8% and -39.6% of the enterprise population (ANCE, 2021a). As mentioned in the previous chapter, this meant that the Italian productive structure lost the most knowledge-intensive companies, while the micro or individual enterprises have come to occupy a larger share of the total construction sector business population (Interview 54).

Considering investment levels, this aspect becomes even more evident. By 2019, investment in public works and new housing had been declining by 30% and 50% respectively, while maintenance works saw some very slow improvements.

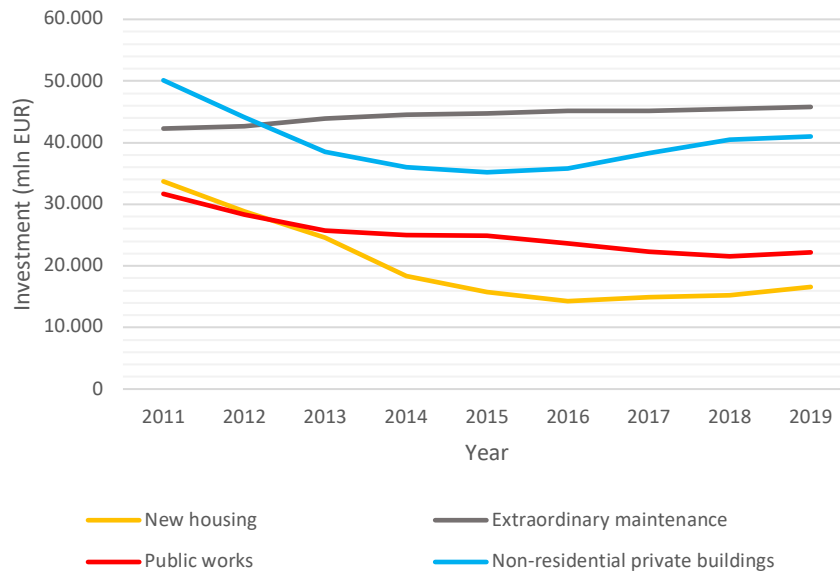


Figure 72 Construction sector investment (mln, EUR) (ANCE Observatory Reports, 2012-2020)

From a dimensional point of view, it can be seen from Figure 73 that all of the dimensional classes reported a heavy drop in revenues and none of them recovered the levels of the financial crises. This shrinkage of the sector in terms of revenues partially mirrors the shrinkage of the sector in terms of number of enterprises.

Moreover, the financial crisis led banks to a very high level of caution towards the construction sector, especially residential constructions. Particularly after the Basel III regulations, it became very hard for companies to find financing, since banks held a remarkable share of their non-performing loans in construction (Interview 54). This explains the reason for which low interest rates did not relaunch the sector, which was stuck due to a “liquidity trap”. Companies were potentially available to pay higher interest rates, but banks would simply refuse to extend loans (Interview 54).

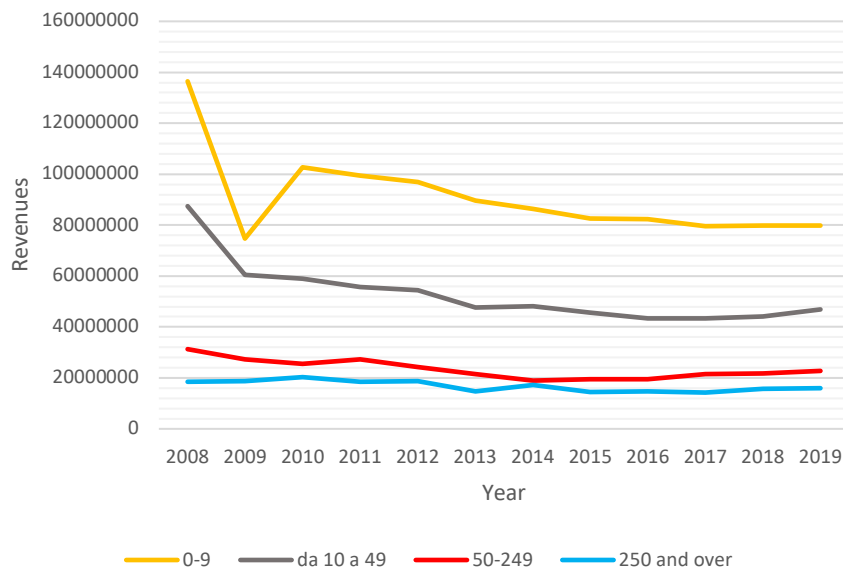


Figure 73 Revenues by company size in the construction sector (ISTAT, 2024c)

The crisis also accelerated a development that would not be expected from the construction sector, namely the increase in its export orientation (Interviews 54, 55). With the collapse of the internal market, a considerable number of companies looked for business opportunities abroad, especially among those working in the segment of public works and infrastructure. A study by ANCE (2017) on a sample of 42 internationally active construction companies displays this trend with clarity. As can be seen from Figure 74, the impact of international contracts on the total revenues of the sampled companies had already displayed a tendency to grow, but it was only in 2009 that foreign revenues surpassed domestic revenues. This trend continued for the whole post-crisis period. While in 2004 only 31% of the revenues of these companies was accounted for by international contracts, this percentage had raised to 73% by 2016.

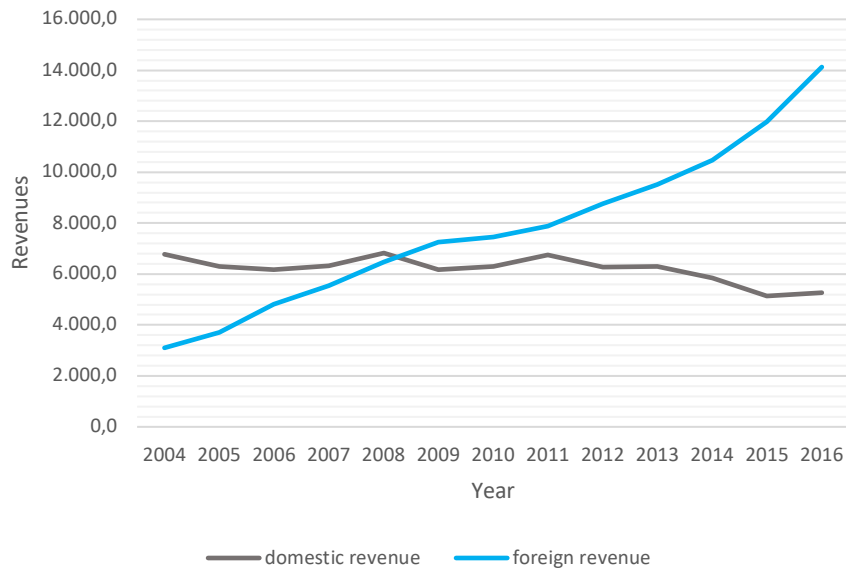


Figure 74 Domestic and foreign revenues of 42 companies from the construction sector (mln, EUR) (ANCE, 2017)

Considering the crisis condition in which it stumbled and its systemic relevance, it may then sound puzzling that this sector not only was not targeted by some form of industrial policy, but it also was not supported countercyclically. This despite the fact that, in the post-crisis period, the sectoral representatives did call occasionally for industrial policy. For instance, the former ANCE president De Albertis stated during a parliament hearing that “[t]here is a need to begin right from industrial policies. Thinking to improve and make more competitive through rules a system like ours, a sector like ours, leads to poor results, and the events unfolding show it” (Camera dei Deputati, 2016b: p. 3)

The little government support that was given was overwhelmingly at the advantage of the renewals and maintenance works segments of the industry, which factually was the only segment that managed to remain afloat, while the most knowledge-intensive segments were left to their fate (Interviews 54, 55). This support was nevertheless still encouraged by the business organization of constructors as a way to keep the sector afloat (Camera dei Deputati, 2016b)

Although it may be hard to find a clear answer as to why there was no support for the most advanced segments of the sector, there are several explanations available. A first one is budget-related, and namely the fact that support to the sector implied a certain volume of public investment, especially in infrastructure, which would contradict the budget moderation agenda of the post-crisis governments, which allegedly privileged cutting investments over other consumption expenses (Interviews 54, 55). Moreover, a very large part of this reduction in expenditure was implemented by the municipalities, and the factual implementation of the flexibilization of the “internal stability and growth pact” was ineffective (ANCE, 2009; 2011). In this respect, subsidizing maintenance works appears as cheaper and

easier both because it can be done through tax deductions, and because it is such a large segment that it does not require a particular targeting effort.

A second reason may have to do with matters of “electoral politics”, namely the simple fact that providing some benefits to the constituency of the self-employed craftsmen is clever from an electoral point of view, both for its effects on the constituency per se and for the perceived benefits from the voters. This interpretation, which would relate to the electoral politics view of economic policy (Beramendi et al., 2015), is only marginally confirmed by the interview and document sources.

Third, as clear from what argued earlier, cheaper regulation-based relaunching options of the residential construction sector also seemed to be out of the game after the financial crisis and the Basel III regulations, after which banks would simply try to disengage from the sector.

It is a general impression that one could gather from the interview material that the employer association of the construction sector tends to be more focused on the public works segment, possibly also because companies in that segment tend to be larger. This nonetheless, size did not seem to matter in this case as it mattered for steelmaking, when it came to make policymakers wary.

With the construction sector we see what happened in a sector that is strongly dependent on internal demand. The tendency has been for the construction industry to ask government intervention, although such support never materialized. Moreover, it should be pointed out that the Italian construction industry is particularly fragmented dimensionally, making so that large players in the sector would have relatively little coordination and mobilization capacity (ANCE, 2024a).

7.4) The chemical sector between recovery and restructuring

Among the industrial sectors affected by the crisis, the chemical sector figured as one of the most resilient. Factually, a story of stagnation, rather than decline can be traced for the Italian chemical sector, which, as can be observed in Figure 75, started recovering from the crisis only in 2015 and grew consistently afterwards, although never reaching the pre-crisis values.⁵⁷

⁵⁷ There are, at different timepoints, differences arising when considering OECD and Federchimica data when evaluating the balance of payments. These differences arise in particular when calculating the trade balance of “chemical and pharmaceutical products”. While such balance consistently positive looking at OECD data, it is instead consistently negative when looking at Federchimica data. This may due to differences in which industry segments are included in the respective calculations which, being the chemical sector highly heterogeneous, can have substantial effect on final results. I will here stick overwhelmingly to OECD and ISTAT data, since this allows a higher level of comparison between sectors and countries, and I will use Federchimica data mostly when digging into data for more specific products or market segments.



Figure 75 Value added in the Italian chemical sector broadly defined (chemicals + pharma + rubber and plastics) (ISTAT, 2024d)

It is also fundamental to consider that the chemical sector displays a degree of internal heterogeneity which is much higher than all of the other sectors considered in this chapter. Such heterogeneity can be considered in two ways. First, the chemical sector broadly considered would include chemicals, pharmaceuticals and rubber and plastics, which appear separated in most of the conventional statistical sectoral accounts. Second, two fields within chemistry are usually identified from an industrial point of view: basic chemistry and specialized chemistry. While “basic chemistry” produces more standardized and basic intermediate products that benefit from scale production but carry lower margins, “specialized chemistry” (or advanced chemistry) serves more direct applications (e.g. industrial additives) or final customers (e.g. cosmetics), and usually allows for higher margins and higher innovation intensity.

Observing the individual segments of the chemical sector broadly considered, it is visible that, while the generic chemical products segment grew only for a limited amount of time after the crisis, the other two segments, especially pharmaceuticals, recovered better (Figure 76). However, since the absolute values of the rubber and plastics segment is by far the largest, the general trend tends to move in sync with it.

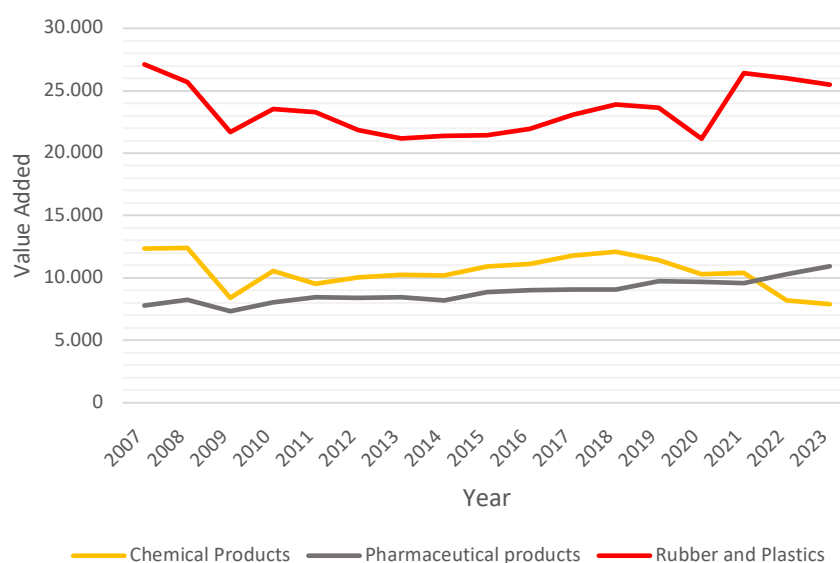


Figure 76 Value added in the chemical sector by segments (ISTAT, 2024d)

When shifting to the sub-categories of chemical products narrowly defined, the degree of heterogeneity is remarkable. It follows that the main “customer sectors” are also different, even within the same product category⁵⁸. However, it seems safe to observe that the chemical sector narrowly defined seems to be particularly dependent on construction, textiles, metallurgy, automotive, furniture and mechanical industry (Federchimica, 2016b). Looking at the 2019 and 2021 data for the chemical sector narrowly defined, it can be seen that Italian chemical production is not particularly concentrated in any of the specific product categories, with the largest concentrations being in rubber-plastics (19.9%), textiles and leather (5.8%), metals (5.1%), agriculture (5%) foodstuffs (5.3%), pharmaceuticals (4.3%) and construction (4.7%) (Federchimica, 2023a).

Interestingly, the same calculations done through the input-output tables by Federchimica for the year 2010, show that the metals used to account for 7% of the chemical sector output, construction for 5.4% and the mechanical sector 5.2% (Federchimica, 2016b). This may imply that, at least to some extent, the sector had to move to other customer sectors, considering the drop in steel and in automotive production.

Considering the segments of the chemical products along the second dimension (basic vs specialized chemistry) specifically, it can be seen from Figure 77 that the Italian chemical industry stabilized its revenues in the specialized segment of chemistry, although revenues stagnated for the whole post-2012 period. The balance between specialized and basic chemistry nevertheless changed little over time, with

⁵⁸ For example, the product category of paints and varnishes, which sees Italy as second European producer, owes 55% of its revenues to the construction sector, 20% to the mechanical sector and 15% to furniture (Federchimica, 2016c)

the latter just showing a more erratic tendency. If detergents and cosmetics, usually thought of as specialized chemistry, would be merged with the category of specialized chemistry, the revenues levels would even display a decline over time. This hints to the fact that the mentioned strategy of the Italian chemical sector to grow by focussing on specialized chemistry may have not paid out as originally intended.

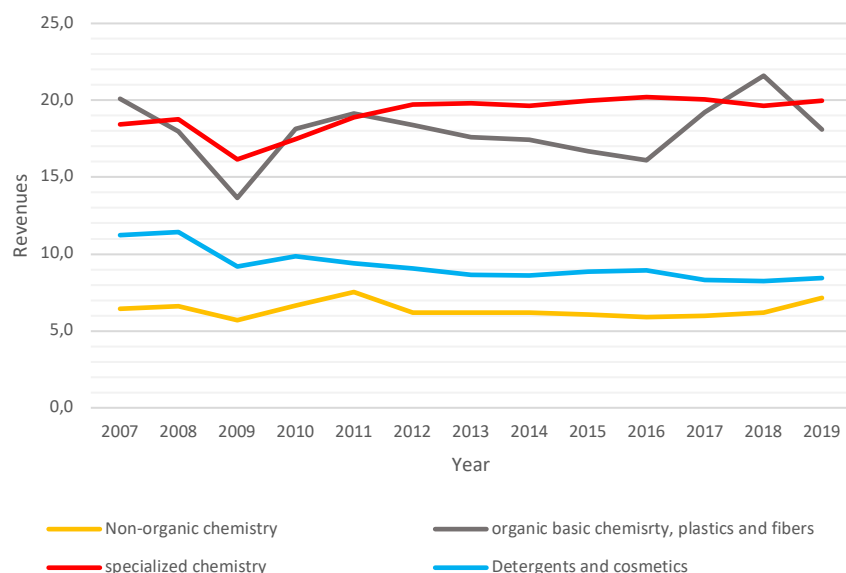


Figure 77 Revenues of the Italian chemical sector by segment (bn, EUR) (Federchimica, 2024)

It is eventually considerable to observe that dimension mattered remarkably when considering growth in revenues over time. It is useful in this respect to consider the three main sectors of the chemical industry separately. Although in all three of the sectors the trend tends to be flatlined, it can be observed that the largest companies tend to gradually perform much better than the medium and small companies, especially in the segment of rubber and plastic products.

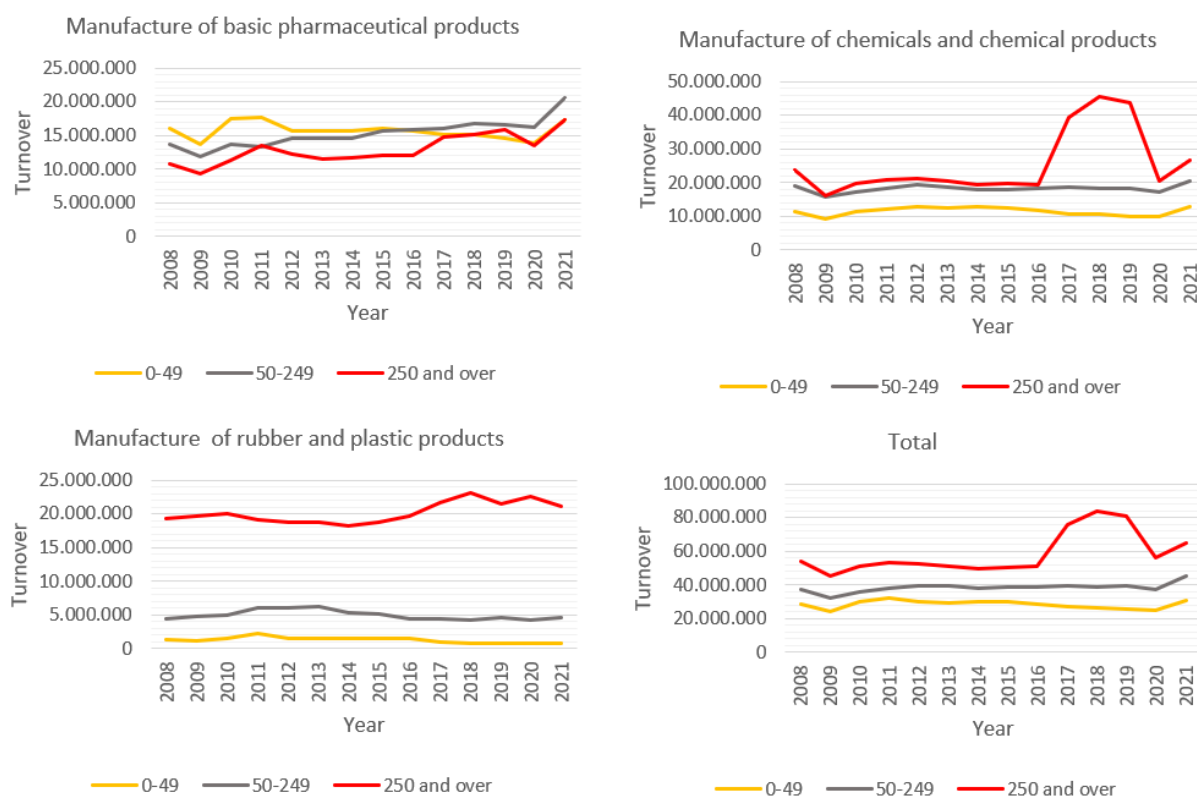


Figure 78 Company turnover by company size and branch of chemical activity (thousand, EUR) (ISTAT, 2024b)

This is likely to be a reflection of the higher export-propensity of larger enterprises, which made them more flexible in adapting to the new post-crisis conditions. In the case of the chemical sector this is particularly relevant because, as mentioned before, foreign players weight for roughly 34% of the revenues of the sector and are mostly large companies. Considering that domestic large companies are very few, this also may reflect the fact that the industrial segment that strengthened the most after the crisis was the foreign-owned one.

This interpretation seems to be strengthened when looking at the revenues of the 10 largest Italian domestic chemical companies over time. As can be seen in figure 79, revenues tended to stagnate and even decline until the stimulus package of 2020, in contradiction to what observed as the general trend. These stagnating revenues made also so that new large Italian players able to compete in international markets did not form in the post-crisis period.

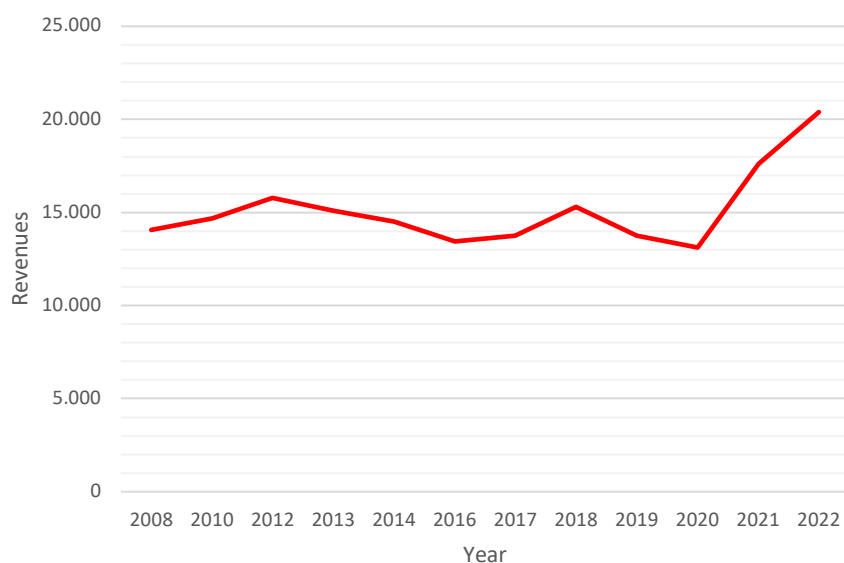


Figure 79 Revenues of the 10 largest Italian chemical groups (2008-2022) (mln, EUR) (own calculations based on: Federchimica Reports, 2010-2023)

The internationalization drive of the sector thus accelerated in the post crisis period, at least in two ways. On the one hand, the export share raised dramatically from values below 45% in 2007, to values above 60% in 2020, with international orientation being particularly strong when considering also the pharmaceutical sector (Figure 80). On the other hand, internationalization also meant high levels of outwards foreign investment for three main reasons: cost advantages, serving new markets and joining international partnerships allowing to import certain technologies (Federchimica, 2014; 2016a). Looking at the first 50 largest domestic Italian firms can help giving an idea of the magnitude of the phenomenon. While in 2014 these companies employed 51% of their personnel in Italy, this percentage had dropped to 41% by 2022⁵⁹. In other terms, while the number of employees abroad increased by 35.1%, the number of employees in Italy only increased by 8.2%.

Partnerships and joint ventures appear to have had a particularly relevant role as an internationalization strategy especially for larger companies. According to Federchimica (2014), among the most important reasons of engaging in partnerships are cost reduction (60%), development of new products (48%) and access to new markets (40%), and acquisition of new technologies (24%).

⁵⁹ Based on my own data processing from the Federchimica reports 2022-2023 and 2015-2016.

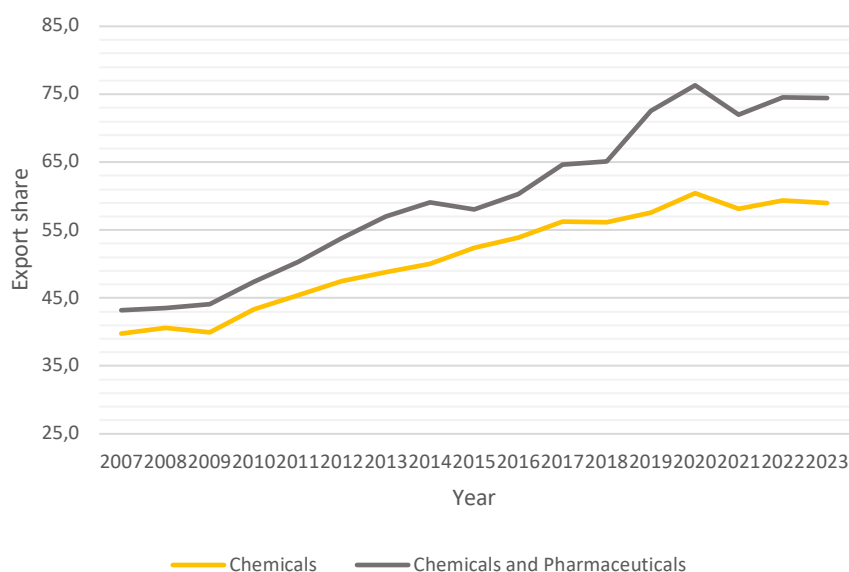


Figure 80 Share of exports on total chemical production (%) (Federchimica, 2024)

Overall considered, the post-crisis period was featured by a further acceleration and then stabilization of previously established tendencies.

Most importantly, the growing role of China on the World chemical market changed the competitive ground (Federchimica, 2016b). As can be seen in Figure 81, the share of China on the total global chemical market increased from 24.3% in 2009 to 39.5% in 2015, then stabilizing over the subsequent period. Conversely, the Italian share declined from 2.5% to 1.4% of global output in 2019.⁶⁰ Once again, there is intra-sector variance when considering this scenario, with sub-sectors such as the pharmaceuticals' raw materials being excellence production and with an export share of 85% (Federchimica-Aschimfarma, 2016).

⁶⁰ Calculation based on Federchimica data. Data on revenues display some important differences for the years 2016-2019 between the ISTAT/Eurostat and the Federchimica data. While the former display a steep rise in revenues in those years, Federchimica data provide rather a picture of stagnation. This may have to do again with differences in calculations between the two databases. However, this difference, being limited in time, does not invalidate the main observation of market share loss over time.

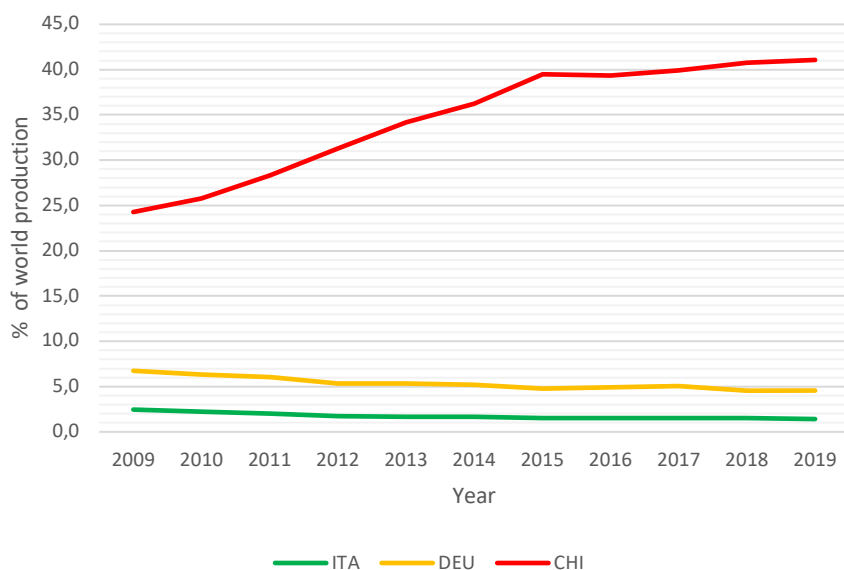


Figure 81 Share of global chemical production (%) (Federchimica, 2024)

Price competition from Chinese exports intensified also in the field of specialized chemistry, which traditionally allowed companies to diversify towards less price-sensitive and more value-added activities (Federchimica, 2014). According to Federchimica (2014; 2016a), this also led to a change in the type of innovation required for staying competitive on the market, since process and incremental innovation has become the baseline, while competitiveness entails more disruptive innovations which also required a more structured interaction between companies and research centres, which especially SMEs find it difficult to build. Moreover, while multinational companies have the critical size, technologies and market power for engaging in international partnerships allowing to import and export certain technologies, the same is not true for SMEs.

This has to do with a problem already mentioned in the previous chapter, namely that Italian chemical companies found it increasingly difficult to transfer higher prices to final customers just based on incremental innovations. This may also partially account for the fact that revenues stagnated, rather than rising, for the Italian specialized chemistry, which can stand to indicate a lower pricing power.

Beyond competition with China, the Middle East and the USA also started enjoying location-related advantages in basic chemistry, due to the wide availability domestically of some resources, especially oil and shale gas (Federchimica, 2016a).

According to the Federchimica (2014) report, the competitiveness gap was worsened by some problems, some affecting Italy specifically, and some others being wider European issues.

From the point of view of regulation, European regulation is most often considered to be too burdensome for the industry (e.g. the REACH regulation), and the Italian way of implementing the mentioned

regulation is specifically considered to be disadvantageous in comparative perspective (Federchimica, 2014; 2016a).

Second, the price competitiveness problem was further exacerbated by the energy price disadvantage, considering that, according to Federchimica (2014), energy costs amounted to 43% of the value added in the industry.⁶¹ In particular, and similarly to the German case, it is tax-based costs to be considered too high, impacting for roughly 37% of electricity prices, while the average for the same period for other European countries was 27% (Federchimica, 2014). The Federchimica report goes as far as stating that the differences in energy costs would be “[t]he most serious factor of potential delocalization of Italian chemical production, not only towards far and low-cost areas, but also towards other European countries such as France or Spain” (Federchimica, 2014: p. 17-18). Moreover, and as seen for the steelmaking sector, the lack of intervention of Italy on a compensation mechanism for indirect prices due to the ETS system made so that the ETS system would disadvantage companies especially located in Italy also vis-à-vis other European companies (Federchimica, 2016a).

Third, the condition of infrastructure in Italy was such that the costs of logistics activities was assessed to be 25% higher compared to larger European countries, thereby further penalizing competitiveness (Federchimica, 2014; 2016a).

Fourth, the industry criticized the system of incentivization of R&D as too complex and thus scarcely accessible by companies with few human and financial resources (Federchimica, 2016).

It should be pointed out that, apparently, access to credit was not considered to be a problem for the sector, which displayed one of the lowest rates of non-performing loans, and whose financial position tended to be, more solid than was the case in other sectors (Interviews 52, 53; Federchimica, 2014; 2023a). There are, once again, inter-sector differences in this respect. The topic of access to finance was more important for sub-sectors that relied on more risky innovation projects, such as pharmaceuticals, which thus needed to have easier access to risk capital (Federchimica-Aschimfarma, 2016).

Therefore, the industrial policy required by the sector in the post-crisis period was overwhelmingly concerned with regulatory matters and requirements which, from the point of view of the industry, made Italy a more unattractive investment location. Where state finance could have stepped in was, beyond the “evergreen” of R&D, in establishing some compensation mechanisms for high energy prices. In general, an industrial policy for the sector as a whole was largely missing in this period, probably also due to the fact that the sector was factually performing much better than others.

⁶¹ It is worth keeping in mind that, being the industry highly diverse (the Federchimica 2016 report mentions 42 product categories), energy intensity also changes according to the segment.

It would nevertheless be inaccurate to dismiss this period as such a flatlined period. Conversely, a game was played in these years that had the potential to redefine the whole configuration of Italian chemistry, namely the role of Versalis.

7.4.1) An uncomfortable asset: the Versalis case

As previously mentioned, Versalis⁶² is the largest Italian chemical company and also a subsidiary of the petrochemical state-owned enterprise ENI, which is, in turn, among the largest Italian companies.

Like any other multinational company in the sector, Versalis engaged in a strong internationalization strategy. The expansion strategy of the company was highly dynamic, with internationalization projects such as in South Korea in 2013, where the company engaged in a joint venture with Lotte Chemicals (*Lotte Versalis Elastomers - LVE*). The joint venture was aimed at placing Versalis better for the products that were directly related to the rising Asian automotive industry (Il Sole 24 Ore, 2016). Moreover, the company planned further expansion in the Asian and US markets (Versalis, 2016).

Such international orientation, did not exclude a very important systemic role of Versalis in the Italian system, which seems to have been directly tied to its nature of state-owned company. For instance, while the average share of workers employed domestically among the largest Italian chemical enterprises was 51%, for Versalis it was 82% and, by 2022, it only fell to 80% (on average -10% for the others).

Moreover, Versalis was engaged in several projects of conversion of production of Italian plants. In 2014, Versalis, ENI and the MISE signed a memorandum of understanding aimed at relaunching the petrochemical plant of Porto Marghera and creating a green chemistry technological hub, by means of a partnership with the US company Elevance Renewable Sciences (Versalis, 2015; 2016).

Other agreements include that with Solazyme inc for bio products and oil from renewable sources, as well as the Matrica spa, a joint venture between Novament and Versalis aimed at converting the Porto Torres area in Sardinia into a bio-refinery from vegetal-based products (Il Sole 24 Ore, 2018a; Versalis, 2015).

It is on this role of “systemic business” that contrasts ensued between the intentions of ENI and the pressures from politics. The petrochemical company took issue with the losses that Versalis represented for its finances, which were estimated to amount to 5.6 billion euros for the 2005-2014 period (ENI, 2015). It should be remarked that Versalis was also born as a company, during the privatization period, that encompassed the sectors that were not of interest for the private investors, and thus inherently started

⁶² More specifically, Versalis was specialized in oil-derived products and plastics, such as the polyethylene, styrenics and elastomers.

from a disadvantaged point (Camera dei Deputati, 2015). Therefore, ENI was, in all effects, cross-subsidizing its chemical business, which accounted for only roughly 4% of its total business activity, through the profits of its ordinary and more successful petrochemical business. It is easy to argue that such financial commitment to Versalis may only make sense when framed in the context of a pressure on ENI to play a role in the chemical system.

However, it was reported in the previous chapter how such pressure was usually badly tolerated by ENI itself, which in all evidence planned to quit its chemical business. This seemed to be happening in mid-2015, when ENI announced it was finding an “industrial partner” to whom it would sell part of Versalis. The deal seemed to be certain, to the extent that Versalis already prepared an industrial plan of its own, since ENI classified the Versalis Group as “discontinued operations” in its financial statement (Versalis, 2016).

This stated intention caused a big outcry by politics, although curiously not by the government. In 2015, the Democratic Party (PD) senator Salvatore Tomaselli initiated an audition on the “perspectives for the Italian chemical sector” at the Senate Commission of Industry (Polimerica, 2015; ENI, 2015).

The senator declared that “[t]he utmost clarity should be given about this operation with regard to the objectives, and with the utmost transparency on the programs that are intended to be followed”. (Salvatore Tomaselli, PD Senator, quoted in Polimerica, 2015).

The Camera dei Deputati approved, on the initiative of a PD deputy, a resolution binding the government to take action in the Versalis case (Camera dei Deputati, 2015). The fact that a resolution was needed to make the government take a stance on the issue, is already telling of the scarce reactivity of the government itself. Meanwhile, trade unions declared a first strike against the project of selling Versalis and, allegedly, to abandon the business of bioplastics (La Repubblica, 2015b)

In January 2016, the Ministry of Economic Development held a meeting with ENI, Versalis, and the chemical trade unions. In the meeting, ENI confirmed its intention to sell the company, but agreed to maintain at least a “considerable” share of Versalis, as a guarantee for the previously accepted investment plan, the maintenance of the productive capacities for at least five years more, the maintenance of the occupational levels for at least three years and the confirmation of the maintaining the legal headquarter in Italy (ENI, 2016). The concerns raised in the Senate were thus fully addressed, but the node of ownership remained, since sources close to the deal reported that ENI was planning to sell a 70% stake to the American fund SK Capital, whose small size made the acquisition of Versalis a daring financial investment per se, with especially trade unions raising doubts about the sustainability of such operation (La Repubblica, 2016b; 2016e).

The MISE ministry Federica Guidi then took a stance supporting the privatization plan, arguing that “[E]ni is a public participated company, but it is autonomous, the government is not involved, but the current conditions are not those of the past. I agree that Italy should keep its chemical sector and we

will be active to make sure that the acquiring subject will be solid and reliable” (Federica Guidi cited in La Repubblica, 2016b).

Reporting again at the Camera dei Deputati, the Vice Minister for Economic Development Teresa Bellanova also stated that the government intended to support the ENI decision of ceding the largest share of the company to SK capital, as a way to find the 1.2 billion financing required to finance its investment plans (Camera dei Deputati, 2016a).

Trade unions did not accept nevertheless the sale deal for Versalis. They also considered unsatisfactory the government solution, and thus called for a strike and made a united call for an intervention of the Cassa Depositi e Prestiti (Senato della Repubblica, 2016; La Repubblica, 2016b; CISL, 2016; Reuters, 2016). It was demanded that Versalis should remain in public hands, considering the weak situation of the Italian chemical sector, and that the government should intervene more decisively.

In a Senate audition, Salvatore Tomaselli, answering to the unionists on the involvement of CDP, replied that the Senate Commission received communication that “[t]he hypothesis is currently not on the table”, although it was unclear whether this was for will of ENI or the government (Senato della Repubblica, 2016).

The attempt to cede Versalis to SK Capital eventually broke down in June 2016, allegedly after the two parts failed to find an agreement on the company governance, with wide positive welcoming by trade unions, local politicians and even politicians by the government party PD (La Stampa, 2016).

After the failure of the cession attempt, Claudio Descalzi, ENI manager, stated in 2017 that intention was not (or not anymore) to cede Versalis, but rather to invest in its petrochemical activities and green chemicals, since the company was performing very positively (Il Sole 24 Ore, 2017f; 2017h)

“We closed the areas that lost the most and, above all, we changed product lines, since producing only intermediate products made us too much tied to oil prices. While moving our activities to the penultimate step, the one that delivers the final product to whom then manufactures it, kept us away from price fluctuations. Therefore, we managed to produce 33% of specialties and above all, to invert the cycle (...) We want to bet on green chemicals in order to become the first group in that sector” (Descalzi, interviewed in: Il Sole 24 Ore, 2017g).

The stated intent is thus to create aggregations that would promote a “strong green chemicals pole” in Italy, which notoriously lacked players of a comparable dimension to the largest international players (Il Sole 24 Ore, 2017g).

At some point, it appears that this large project of crafting Italian chemical players started seeing the engagement of the Cassa Depositi e Prestiti, which was apparently devising a project with the purpose of creating a large Italian player by merging Versalis (state-owned through ENI), Mossi & Ghisolfi and Polynt (Il Sole 24 Ore, 2017e). Neither ENI nor CDP gave any official statement on the matter, while

Mossi & Ghisolfi commented rather welcomingly and Polyint (controlled by two US private equity groups) stated to be not interested (Reuters, 2017). The plan would have made sense especially in sight of the investment plan into green chemicals by Versalis, which would have well complemented with the equipment of Mossi & Ghisolfi, which owned the largest bioethanol plant in the World, in Crescentino (Piedmont) (Il Sole 24 Ore, 2017i).

This came in a period in which some fragilities started appearing in the Italian system of large chemical corporations and specifically involving Mossi & Ghisolfi, the third largest Italian chemical group. The company was among the first three world producers of Polyethylene Terephthalate (PET), a type of plastics used especially for food packaging, and planned to shift business segment to bioplastics. Therefore, it engaged in an aggressive expansion strategy, both national and international, the most visible part of which was the mentioned bioethanol plant in Crescentino (La Repubblica, 2015b). Partially as an effect of this strategy, Mossi & Ghisolfi started declaring to be in financial troubles due to excessive indebtedness in 2016, when a failed investment in Texas made the bankruptcy perspective real (Il Secolo XIX, 2024).

The government reacted by opening a crisis task force and, in this period, Versalis showed interest in acquiring the activities of the company (Senato della Repubblica, 2017; Polimerica, 2017).

When Mossi & Ghisolfi eventually declared bankruptcy in 2018, Versalis acquired the four companies making up the “bio” business units of the group (*Biochemtex*, *Beta Renewables*, *Ipb* and *Ipb energia*), including the Crescentino plant (Polimerica, 2018; Versalis, 2019). This also allowed Versalis to acquire the Proesa, Greg and Moghi technologies for the production of biofuel and biochemicals, avoiding thus potential acquisition of technology from foreign players, although it has to be remarked that Versalis was the only bidder in the bankruptcy auction (Polimerica, 2018). The foreign assets of the group were instead gradually sold out to foreign investors. It is unclear whether the intention of Versalis to acquire the biochemical division of Mossi & Ghisolfi was solicited at the political level or whether it was simply an industrial strategy of the company. However, once again it highlights the important role that the state-owned enterprise has played as a central pillar of Italian chemistry.

The ENI strategic plan 2018-2021 made available 7 billion euros of investment in Italy (Il Sole 24 Ore, 2018b). For the chemical sector, the plan was to continue the process of internationalization, and to continue the process of shifting focus on high margin products and especially in biochemistry (ENI, 2018). The privatization perspective seemed thus to have been outside the table for a while, also because Versalis reported, in 2016 and 2017, the best results of its recent history in terms of operating profits.

However, in 2018 and 2019, Versalis started again reporting negative operating profits for 382 million euros (2018) and 478 million euros (2019) and a negative financial position in 2019 of one billion euros (Versalis, 2019; 2020). These negative results were attributed to a series of factors. First, lower demand from the usual customer sectors, especially automotive, and lower demand for single-use plastics

(Versalis, 2020). Second, downwards pressures on prices for the more traditional basic chemistry products, due to a flooding of the market by US producers of polyethylene (Versalis, 2019; 2020). Third, production had to be suddenly stopped in a series of production locations (Versalis, 2020). In both 2018 and 2019, assets impairment also carried a bad influence on the final results (Versalis, 2019; 2020).

Therefore, as can be seen in Figure 82, the “golden period” of Versalis seems to have been limited to just two years in the post-crisis period, and the company was once again stuck into financial troubles, especially in the most traditional chemical segments. Versalis would nevertheless continue later its strategy of positioning towards less sensitive price segments of the market, as done with its acquisition of 40% in Finproject and the agreement with the state-owned SAIPEM to develop bioethanol (Polimerica, 2019b; 2020b; 2021d).

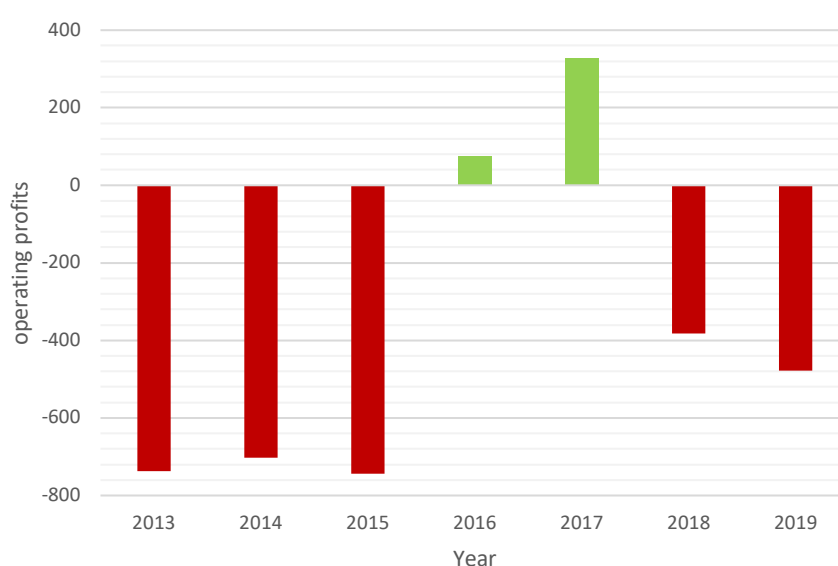


Figure 82 Operating profits versalis over time (mln, EUR) (Versalis Annual Reports, 2014-2020)

7.4.2) The chemical industry between reconversion and preservation

All in all, the case of the chemical industry is relevant in many respects. To begin with, it points to caution when evaluating a sector’s condition by simply looking at the statistical aggregates. Although the industry per se recovered better compared to other sectors, systemic crises were occurring in the largest companies threatened to carry large consequences for the productive structure.

Second, it shows that governments can be bystanders even when there is mounting political pressure for them to intervene in an economic sector. The Versalis case became very salient and within the parties of the majority voices arose asking the government to take a position. This nonetheless, the government decided to remain largely passive on the issue. Government neutrality, or benevolence, should

nevertheless not be understood exclusively in terms of indifference to the chemical sector, but the hypothesis is open that it may be factually part of a policy line. Getting back to the reasoning detailed in the previous chapter on state-owned enterprises, it was highlighted how their autonomy and role within the Italian industrial scene increased remarkably during the 2000s. Being ENI one of the largest Italian companies, and one of the most successful from the point of view of profitability, it can be reasonable to hypothesize it may have a considerable influence. Considering that ENI apparently wanted to quit the chemical business, the green light from the government may have come after some bargaining.

This appears all the more likely considering that ENI CEO Claudio Descalzi was appointed in 2014 by the Renzi government and Renzi did not shy away from taking responsibility for his appointment even when the CEO faced corruption allegations (La Repubblica, 2014c). Coordination with the government seems thus to have been likely, although no information regarding the terms of such coordination is available. Considering the agreement between ENI and the MISE of 2016, it seems very likely that the government agreed to give a free hand to ENI provided that occupational and production levels would have been maintained in the very short term. Coincidentally, the temporal limits to maintenance of production and employment levels would have allowed the incumbent government to arrive to 2018, year of new elections, without having to deal with the industrial crisis in the chemical sector.

7.5) “Giving something to everybody”: industrial policy in the post-crisis period

After the sectoral analyses conducted in the previous sections, we can now turn our view to the general industrial policy approach of the governments that alternated between 2011 and 2018. We come to stop and reflect at this point because the post-2011 period was featured by strong instability in the Italian political scene, which culminated in 2018, when the Five Star Movement became the largest Italian party with 32.7% of the votes and formed a government with the Lega Nord. That was factually a moment of rupture, where the old political establishment lost for the first time the reins of power.

The post-crisis period was factually a period of high uncertainty regarding industrial policy, primarily because government precarity created discontinuities regarding larger projects. Nevertheless, it should also be observed that industrial policy per se did not suffer excessively from this alternation in power. To begin with, all the four governments that alternated over those eight years shared the pattern of relying on a coalition between the Democratic Party and other political forces right-to-the centre. The Letta (2013-2014) government was displaced by an internal coup d'état within the Democratic Party, but the political base of the Renzi government did not change substantially, and the same can be stated regarding the Gentiloni government (2017-2018). Even from the point of view of legislation, there is a strong line of continuity, with marginal modifications, between these governments. For instance the

reform of the “New Sabatini Law”, which will we treat more extensively later, was already designed during the Letta government and then approved and marginally modified by the Renzi government. Similarly, the establishment of a “Fund for Competitiveness and Productivity” was designed during the Renzi government and confirmed with slight modifications during the Gentiloni government.

The Renzi government engaged nevertheless in a more proactive effort, at least rhetorically, towards industrial policy than was the case with the technocratic government of Mario Monti (2011-2013) and the “temporary” governments of Letta and Gentiloni. This was true provided the definition of industrial policy is narrowed down. The industrial policy line of these governments was overwhelmingly horizontal, thus not targeting specific sectors, but rather addressing general competitiveness factors (e.g. productivity, digitalization, renewal of machinery) that are nevertheless specifically proper of manufacturing (Interview 49). The idea was that industrial policy should thus create general competitive conditions, which differs from *Ordnungspolitik* just to the extent that in this case the government would take an active part that goes beyond the simple regulatory one. For this reason, the industrial policy line of these governments is still considered to be, by some, strictly market-driven, since the government does not take a leadership or does not push forward any sectoral preference.

This is the kind of industrial policy that is usually called for by the industry. As it could be expected, the main business organization for the industry, Confindustria, advocated for such a kind of horizontal industrial policy. Among the requests of the industry in the context of the hearings for the Industry 4.0 plan, there is the incentivization of R&D and of digital investment, and promotion of industrial policy accelerating aggregation processes between enterprises, the latter to be implemented through tax deductions (Camera dei Deputati, 2016c).

Confindustria also proposed to implement mechanisms of public-private financing for phases of research beyond the basic research, which is already overwhelmingly public. In this respect, they took the example of the German KfW and its role of financing of innovation in Germany, to suggest that CDP would play a similar role in Italy:

“In any case, we have Cassa Depositi e Prestiti, which is becoming an important subject of industrial policy. It is nevertheless evident that we need to accompany this evolution of Cassa Depositi e Prestiti in a better-defined frame” (Andrea Bianchi, Confindustria, in: Camera dei Deputati, 2016c).

Confindustria thus advocated for a selective but not “sectoral” industrial policy. As an example of what they meant by this:

“Sustainability, energy efficiency, and Industry 4.0 are absolutely selective choices, in the sense that orient investment on some large trajectories, but they do not discriminate by sectors” (Andrea Bianchi, Confindustria, in: Camera dei Deputati, 2016c).

The post-crisis governments did in fact follow this general orientation by focussing especially universal and horizontal instruments. The only remarkable difference is that, during the Renzi government, the dramatic trend of reduction in expenditure for industrial policy objectives was at least temporarily halted.

After peaking up during 2008 and 2009, the volume of incentives granted by both the state and the regions declined in 2012 slightly below its 2007 level, namely 3.6 billion Euros (MISE, 2013). The year 2009 also marked the beginning of an unprecedented phenomenon: regional-level incentives (e.g. subsidies, loans, etc.) outvalued the national level ones.

In fact, considering exclusively the national level incentives provided by the MISE programmes, Italy awarded, in 2012, only 1.3 billion Euros in incentives, namely -27% compared to 2007. As mentioned in the previous chapter, this drop in revenues by the central state triggered a considerable drop in the mobilized investments in the South, since the reduction in national level funding was not compensated by the regions (MISE, 2012).

Figure 83 allows to have a better perspective on how the system of incentives developed over the 2000s. It is here visible that the tendency to reduce public spending in industrial policy goals already featured the early 2000s, although after the 2009 crisis they stood at a systematically lower level. Therefore, while the average level of granted funding⁶³ for industrial policy objectives was 6.3 billion per year between 2000 and 2009, this value dropped to 2.5 billion euros in the 2010-2019 period (-61%). It would thus not be excessive to state that the post-crisis period was featured by a devastating wreckage of the Italian system of budget-based industrial policy. It can nevertheless be noticed that, with the coming back of the political governments, starting from the Renzi government, the trend started a rapid increase again, although not nearly close to the levels to the pre-crisis period.

A few words are in order regarding the “*contratti di sviluppo*”, which became, in this period, the main instrument for “vertical” forms of budget-financed industrial policy (Interviews 50, 70). This instrument saw a steep expansion with the Renzi government in 2014, increasing from 73.6 million (2013) to between 300 and 400 million euros per year (MISE, 2013; 2014; 2015; 2016a; 2017; 2018a; 2019; 2020). It is relevant to notice that the instrument, which was originally developed in 2007, became fully operational and used only with the coming back of the “political governments”, namely with the Renzi government, which may be seen, with the due caution, as yet again a reorientation of the industrial policy line in a more developmentalist sense.

⁶³ It is important to specify here that what it is considered with these number is not the amount of expenditure or disbursement from the public budget in the precise year analysed, but rather the level of newly granted funding. There is always a temporal discrepancy between the year at which an incentive is granted, and the year of factual disbursement of that incentive. Considering the disbursements would thus not provide any information about policy priorities, since different programmes have different times of disbursement, and individual cases may affect the disbursement parameter. Therefore, all over analysis, the level of granted funding per year was considered as a much better indicator of policy priorities.

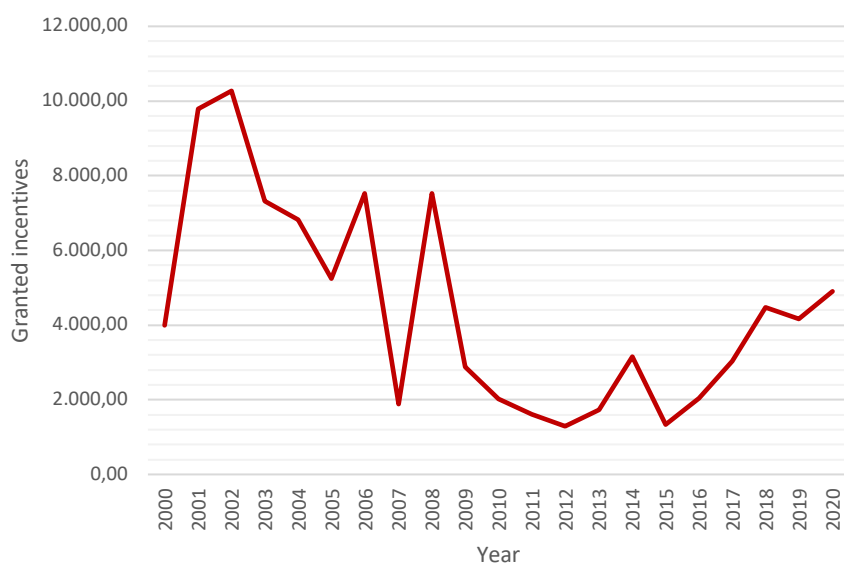


Figure 83 Granted incentives (mln, EUR) (MISE, 2008; 2014; 2015; 2021)

Classifying by industrial policy goals also provides grounds for some remarks. Figure 84 shows the percentage allocated to each industrial policy goal in the post-crisis period. The first striking aspect is the erraticism of such percentages. While this may arguably be due to contingent reasons, we can nevertheless see some clear trends over time that help make sense of this volatility. To begin with, there is a tendency for the role of R&D to be gradually undermined over time, which eventually resulted in the drop of 2019, when R&D only accounted for slightly less than 24% of the granted funding. While the goal of industrial and territorial development started rising again in the middle of the post-crisis years (overwhelmingly as an effect of the growth of the *contratti di sviluppo*), it quickly reversed to decline and, by 2019, it was back to 20% of the total share. The only entry seeing a consistently rising trend is the category “others”, for which scarce specification is given in the documents, despite this entry came to account, in 2019, for 46% of the total expenditure.

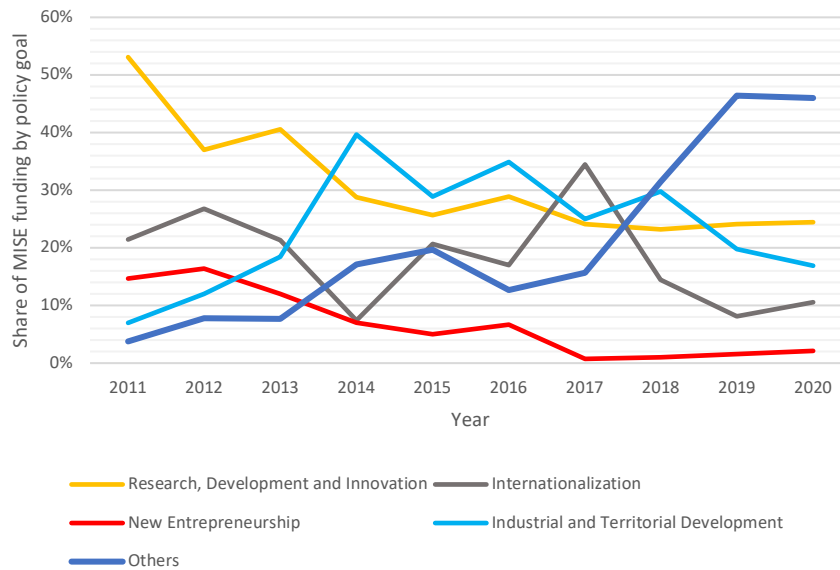


Figure 84 Industrial policy goals of MISE funding (% of total MISE funding) (own calculations based on: MISE, 2008; 2014; 2015; 2021)

These trends allow to make two observations. First, there is a strong inconsistency over time regarding the goals of policies. While in the pre-crisis period the general tendency appeared to be a rise in prominence of R&D financing, the post crisis period sees a consistent decline in this share, and there is no programme maintaining a consistent level over time. This per se indicates a lack of strategic focus on objectives, but also a sluggish implementation of the already existing instruments, as shown for the case of the *contratti di sviluppo*. Second, the stunning increase in the category “others” provides much less clarity on which goals are pursued by such interventions, especially considering that the already existing labels are broad enough to encompass a very wide range of instruments.

The re-politicization of the governments therefore, seems to have halted the trend of declining spending and established a clearer idea of re-intervening in industrial development. However, it also came with more heterogeneity in the goals and without specific ideas on the core sectors to be addressed.

As mentioned, the Renzi government reasoned of industrial policy in a predominantly horizontal way, as to a way to create conditions for business to thrive (Interview 49). This can be clearly seen in the main piece of legislation on industrial policy of the Renzi government: “Industry 4.0”.

The project clearly incorporated many of the suggestions of the industry regarding industrial policy and employed two types of instruments: tax deductions and subsidized finance (MISE, 2016b). The main aim of the plan was to act on productivity by upgrading outdated machinery fleets and infrastructure and intervening “[i]n a logic of sectoral and technological neutrality” (MISE, 2018b: p. 8).

Tax deductions were perhaps the most important and the most strongly appreciated measure by the industry. More specifically, the super *ammortamento* and the *iper-ammortamento* allowed to detract

130% and 250% respectively of the value paid for a certain instrumental good, from the company taxable income. Without going into the detail of the measure, this made up a very large tax subsidy to companies who invested in instrumental goods⁶⁴. Another measure was the “Nuova Sabatini”, which is a partial subsidy to the interest rate paid by companies when undertaking an investment in instrumental goods by borrowing from banks. To finance such loans, banks can both recur to their regular financing channels and to a plafond made available by the Cassa Depositi e Prestiti. Third, the plan aimed at incentivizing R&D activities by means of an automatic tax credit of 50% on the cost of R&D expenditures incurred between 2017 and 2020, tax reductions for patents registered in Italy, and the introduction of a fund for “innovation contracts” for large innovation plans in the field of ICT, nanotechnologies, advanced materials, biotechnologies and space. Eventually, regulatory facilitations and easier access to the *Fondo di Garanzia* were granted to start ups and “innovative SMEs” (MISE, 2016b). The plan also included investment in “enabling infrastructure”, and especially the development of a broad band network (MISE; 2018b).

Eventually, the government initiated, through the ICE agency, a “special plan for Made in Italy”, equipped with around 140 million euros per year between 2017 and 2019 (ICE, 2018; 2019; 2020). The plan was mostly aimed at strengthening the capacity to export and internationalize of Italian companies through light budget means such as communication, education and intermediation. According to the reports, the three sectors to be most affected by the funding were electro-mechanical, fashion-free time and agrarian-food (ICE, 2018; 2019; 2020).

Overall, it can be seen that the real line unifying the post-crisis governments was the introduction of more horizontal measures of industrial policy that would provide general benefits to the business environment. The return of the political Renzi government managed to give a consistent plan in terms of reform of the instruments. However, more fundamental changes were going below the radar of the ministerial and governmental reforms. In fact, it is in this period that the Cassa Depositi e Prestiti engaged in a rapid spurt of capacity buildup in order to become a player intervening, also vertically, in the real economy.

⁶⁴ More specifically, a company can buy an instrumental good (e.g. machinery). The cost of this good is usually spread over a series of years. With the *super-* and *iperammortamento*, each year a “depreciation quota” is deducted from the taxable income of a company, expressing the yearly “cost” of the instrumental good. With the “overvaluation” of the depreciation quota provided by the *super-* and *iperammortamento*, the company’s taxable income is factually reduced more than the value of the instrumental good, thus providing a subsidy of between 40% and 150% beyond the cost of the instrumental good.

7.6) Movement under the surface: the expansion of CDP

When the debt crisis erupted most dramatically, in 2011, the Monti government, engaged in wide austerity measures, widely ignored the industrial policy mission of CDP for the largest part of its relatively short mandate. Nevertheless, the bank was widely used as a counter-cyclical instrument, and mobilized, between 2010 and 2013, around 50 billion Euros, equating to roughly 2-3% of the Italian yearly GDP of those years (Die Welt, 2013; CDP, 2014). In this circumstance, the bank had thus a critical role, especially in a moment where the state fiscal space was being restrained by the austerity turn. Moreover, the bank also supported the stabilization of the bond market by buying public debt, although this intention was never stated overtly by the bank management, which argued that the acquisition of public debt in those years (the amount of which was undisclosed) was functional to the internal operations and business strategy.

With the return of political governments, CDP, SACE and Invitalia were rediscovered as instruments to implement off-balance sheet industrial policy. In particular, the predominantly horizontal approach in the industrial policy of the Renzi government went hand in hand with a boost in the expansion of the “financial muscle” of the government, namely state financial agencies. Therefore, in this period the three main state financial institutions, and especially CDP, underwent substantial changes that enhanced their capacities and fields of activities.

For CDP such changes led to a first strong conflict between the management of the bank and the government. Two particularly issues led Renzi to collide with the managers. First, the government wanted CDP to intervene more directly in the former telecommunication monopolist Telecom Italia, which was privatized in the 1990s. This was functional to the project of building up a highspeed internet network infrastructure for the whole country. Second, Renzi wanted to transform SACE into an export bank that, with SIMEST, would create an “Export Hub” supporting internationalization and exports. Third, the government considered that the rule of CDP of financing only companies that have made profits over the previous two years was particularly limiting for more ambitious industrial policy projects. In particular, this problem was exacerbated by the initial refusal of CDP to intervene to provide financing to the ILVA steelmaking plant.

In both cases, Renzi considered the management of the bank to be overly “conservative” and exceedingly risk averse, impeding more incisive forms of industrial policy intervention that, in his view, were needed in this historical phase. To sum up, according to the government, the bank should be able to take up more risk and be less profit-oriented.

This led to the government pushing for a reshuffling of the bank management. In 2015 Claudio Costamagna and Fabio Gallia replaced Franco Bassanini and Giovanni Gorno Tempini as President and

CEO of CDP respectively. This set process in motion that, in the view of one of the interviewees, would gradually lead to a rising political influence on the bank in terms of the appointment of the management.

“The more “populist” the government, the more it would try to have a say in the bank management. First the government would just appoint the CEO, then the President, then the secondary cadres”
(Interview 44)

In fact, it was praxis that the Banking Foundations, which held 18% of CDP stocks, would indicate the name of the CDP President, while the government would appoint the CEO. The Renzi government broke for the first time this routine, by indicating both the name of the CEO and that of the President. The Banking Foundations were not thrilled about this development but avoided to wage a war against the government, some observers think, because reassured that the profitability levels of the previous administration would be maintained. Nevertheless, the “taboo” was broken and a further step towards the “politicization” of the bank was taken.

In the following sub-sections, I will try to recount the most important fields of expansion of state finance, beginning with the expanded lending function, then detailing the new functions as shareholder, and eventually as a support to exports.

7.6.1) Reaching out to the real economy: the multiplication of CDP funds

As mentioned, the post-crisis period has seen an unprecedented strengthening of the capacity and the financial firepower of CDP. The industrial plan of the bank aimed at mobilizing 160 billion euros of own sources and 265 billion euros together with the private sector, with a strong focus on internationalization (63 bn) and business lending (54 bn).

However, the Cassa Depositi e Prestiti was limited, in its investment options, by a series of rules defined by statute. Among these, the bank could lend to large enterprises or enterprises of strategic importance, which were not operating at loss.

This delimitation was clearly perceived as an obstacle by the governments who started considering CDP as an instrument of industrial policy. As mentioned, Renzi considered this way of managing the bank as excessively risk averse.

Therefore, one of the most important innovations of the Renzi period of CDP was the introduction of a new financial vehicle, the *“Società per la Patrimonializzazione e Ristrutturazione delle Imprese Italiane”* (SSPRII), thought to have been introduced to provide the government with an instrument to circumvent the statutory prohibition to CDP to invest in companies that operate at loss (Il Fatto Quotidiano, 2015b). Concerns had been raised that this could be a new version of the former GEPI: the

financial holding refinancing the operations of SOEs operating at loss, mostly for maintaining occupational levels. Although the SSPRII was not even remotely comparable to the GEPI, this concern was motivated by the fact that this vehicle was mandated to provide financing or acquire equity in companies that undergo temporary financial problems but with good perspectives of profitability in the medium-to-long run. Although this created some concerns, especially among legal practitioners regarding a potentially problematic role of the state as a provider of illegal state aid, the reality was very different. Primarily, the SSPRII was mostly to be financed as a private fund with some state guarantees involved, thus making clear a long-term profitability orientation of the fund. Second, the SSPRII remained largely unused and unfunded. In particular, the state decided to establish the fund as a pool of capital by institutional private investors, and to guarantee part of this capital through state guarantees. However, after 8 years, this instrument did not see significant developments, largely because of the lack of a long-term active refinement of it.

Another field where CDP ventured into new territories is banking, with the institution of the Fondo Atlante for the financial support of banks in temporary difficulties, and whose concept was similar to the SSPRII, but more fortunate in its later developments, perhaps in light of the heavy banking crises that took place during the years of the Renzi government.

Since listing all the funds and lending initiatives of CDP over the years considered would make this exposition too long, a detailed table with the main funds, changes in the plafonds and changes in CDP governance over time is given at the end of this section (Table 6 & 7). From the tables and from the developments in CDP lending a few considerations can be made.

First, CDP engaged in some forms of countercyclical lending and as a facilitator of lending to SMEs in a period where economic and financial instability made so that businesses may struggle to find viable finance.

For the construction sector, CDP played a counter-cyclical role in a period in which the policy of budget cuts triggered recessionary tendencies. For instance, CDP engagement in infrastructure increased by 12% in 2013, against a contracting tendency of – 5.6% of this sector economy-wide (CDP, 2014). Moreover, through the funds FIA and FIA2, CDP entered the new field of real estate finance, and provided plafonds for mortgage finance. This role of CDP for the construction sector has nevertheless been considered rather limited and negligible when considering its aggregate impact (Interview 54).

For SMEs, the policy in this field has followed the more general “horizontal” industrial policy line of the government, namely that of stimulating fixed investment for the modernization of machinery and other “instrumental goods”. Moreover, the strengthening of the guarantee instruments through synergies with the *Fondo di Garanzia* and the setup of a securitization facility also pointed to the strengthening of low-budget instrument of counter-cyclical support.

Second, CDP started, in 2017 taking up a role as provider of venture capital and finance for innovation, which was not a traditionally important function of the bank. This is consistent with the horizontal programs of technological upgrading that were described in the previous section and that also feature the policy of plafonds for machinery upgrading.

As a general consideration, it should be noted that the only two cases of funds that were overtly sector specific were the FIT fund for tourism and the FIA and FIA2 funds for housing. For the largest part, the orientation was horizontal.

In the next two sub-sections I will describe the other two most important innovations, namely the reorientation towards export and its new role as a holding of state-owned enterprises.

	2013	2014	2015
Governance			New Industrial plan 2016-2010. President and CEO are replaced.
Plafond, lending and new funds	CDP, ABI, SACE and SIMEST sign an agreement to increase support to exporting companies. Plafond of 6 bn euros. <u>New funds</u> New <i>real estate</i> engagement of CDP (5 bn EUR) - <i>Plafond Casa (Plafond Home)</i>: 2 bn of finance for housing and renewal work. - Purchasing of 3 billion of residential mortgages and similar • IQ Made in Italy Investment Company Spa (IQ) (private equity)	Piattaforma imprese (SMEs and export finance). - Plafond MID (mis sized companies): 2 bn EUR - Plafond Reti PMI (SME networks): 500 mln - Plafond Export: 500 mln Plafond for financing of new fixed investment for SMEs (2.5 bn EUR)	Budget Law 2015: • Plafond for machinery and fixed investment of 5 billion. Plafond Casa: new zero weight credit line for real estate investments. MISE Decree n. 222, 24/09/2015: measures for the digital agenda and sustainable industry, entailing subsidized interest rates Memorandum of understanding “Export Bank” between CDP and ABI. New resources dedicated up to 14-15 bn EUR. <u>New funds</u> • Fondo Investimento per il Turismo (FIT) (tourism)
New functions	First setting up of an “Export Bank” system.	<i>Legge Sblocca Italia</i> expands the possible functions of the bank. The Law expands the room for manoeuvre of CDP in using market financing (gestione ordinaria). This is extended not only to the provision of public services, but also for wider “initiatives of public utility”. The MEF expands the investment possibilities of FSI to more sectors and to companies who have subsidiaries on the national territory, independently of their legal headquarters.	

Table 6: CDP Investment in new Funds (part 1)

	2016	2017
Governance	FSI is split into CDP Equity and the FSI SGR Fund.	
New Funds	New credit line for investments in “instrumental goods” with zero weight, strengthening synergy with the Fondo di Garanzia per le PMI Plafond Casa (real estate) increased from 2 to 3 billion euros. Piattaforma imprese - Plafond PMI (SMEs): increased from 2 to 6 billion euros. Plafond MID (middle-sized companies): increased from 2 to 3.5 billion euros. New Funds Fondo Atlante I and II (bank recapitalization, 820 mln EUR) QuattroR SGR (enterprises in financial difficulties) FII SGR (private equity, 200 mln EUR)	EFSI Thematic Platform for Italian SMEs (with the EIF): platform providing counter-guarantees to financial intermediaries. It allows to free until 3 bn euros of capital from the Fondo di Garanzia per le PMI. ENSI Platform: platform for the securitisation of SMEs loans. New funds Marguerite II (infrastructure) F2i Terzo Fondo per le infrastrutture (infrastructure) FSI Mid-Market Growth Equity Fund (43%) (growth fund, mid-large companies) Fondo Innovazione e Sviluppo (79%) (aggregation and scaling up) FII Tech Growth (venture capital) FIA2 (housing) Fondo di Fondi Venture Capital (FOF VC) Fondo Vertis Venture 3 (49.5%)
New functions	SIMEST is ceded to SACE: creation of the “Export Hub” CIPE Deliberation n. 51 09/11/2016. Operations and insurable risks by SACE are expanded to include the cruiseships sector. CDP can now lend directly to financial institutions with the purpose to satisfy the needs for funding of specialized banks and non-bank financial institutions.	

Table 7: CDP Investment in new Funds (part 2)

7.6.2) The political struggle over the “Export Hub” and the strengthening of SACE

A project for creating an “Export Bank System” was already in place within CDP before the Renzi government took charge, and by 2013, an agreement had already been signed between CDP, SACE,

SIMEST and the Association of Italian Banking (*Associazione Bancaria Italiana*, ABI), providing a 6 billion worth plafond for Italian exporters (CDP, 2014).

However, the important input of the Renzi government was to make this project more ambitious and less risk-averse, specifically by strengthening the functions of SACE. The goal was the creation of an “Export Hub” (*Polo per l’Export*) that would bring SACE and SIMEST under the management of CDP. SACE would also expand its operations into a fully-fledged “Export Bank” (*Progetto Banca Export*) on the German and French examples. The project found the support of SACE CEO Alessandro Castellano himself (La Repubblica, 2015d).

Nevertheless, this move was not seen upon favourably by the CDP management. In particular, Bassanini voiced concerns that transforming SACE into an export bank would put it under the scrutiny of the Bank of Italy supervision. Since SACE was controlled by CDP, the most threatening risk was that the Bank of Italy would draw the conclusion that CDP would also have to be under its supervision. According to Bassanini, this would have the effect of restricting the room of manoeuvre of CDP, which then would have to adopt a more precautionary approach and thus reduce its lending activity. Despite CDP managers tried to block the “Export Bank” initiative trying to exploit some form of technocratic (legal) knowledge to advocate for its unfeasibility, their attempt was largely unsuccessful.

SIMEST was thus united with SACE under the CDP roof by the end of the Renzi government, forming an integrated “Export Hub”. Moreover, the Law Decree *Investment Compact* enabled SACE to use direct credit as an instrument to foster competitiveness of national exporters, provided it obtained an authorization of the Bank of Italy.

Once again, as seen in the section on equity interventions, here the logic was to promote the internationalization and the upgrading in scale of Italian companies. It remains however unclear whether this interest for an export bank was an “offensive” move aimed at fostering the growth of the export sector, or rather a “defensive move”, since foreign competition in export credit was several times mentioned as a driving motivation for equipping the country with a stronger export bank. Even the *Investment Act* reports this international comparison concern:

*“With the purpose of reinforcing SACE S.p.A. activities in support of export and of internationalization of the Italian economy and its **competitiveness with respect to other entities operating with the same finalities on international markets** (...)”*⁶⁵

As can be seen from Figure 85, the amount of resources mobilized by SACE increased dramatically from 2016 onwards and, by 2018, it doubled.

⁶⁵ Decreto-Legge 24 gennaio 2015, n. 3, Art. 3.

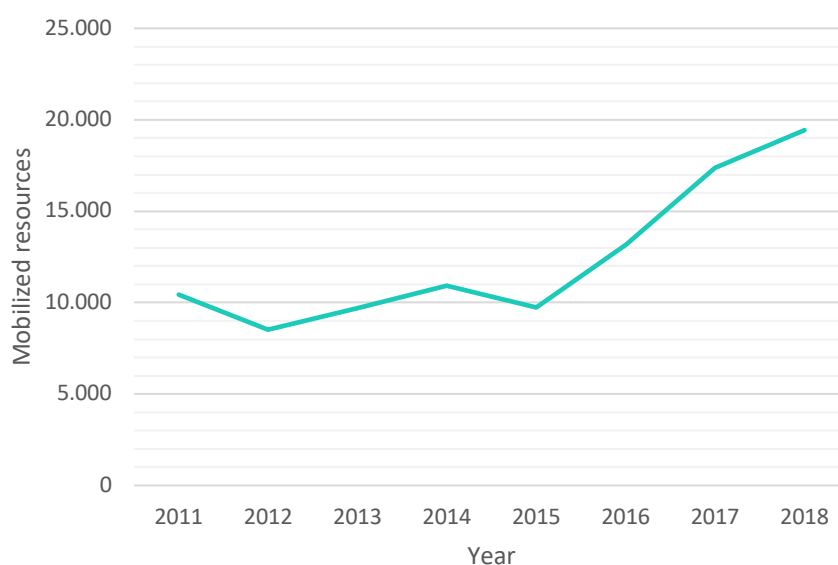


Figure 85 Mobilized financial resources by SACE Spa (mln, EUR) (SACE Annual Reports, 2012-2019)

In terms of measures implemented by the MISE, support to export and internationalization reached its peak in 2017, largely due to the resources employed by SACE programmes that were co-financed with the Ministry (MISE, 2018a). In that year, the resources employed by SACE increased from 13.2 billion to 17.4. billion (+32%) (SACE, 2017; 2018). Looking more thoroughly, it can be seen that roughly 7 billion euros are accounted for by only four investments, in Qatar and the United States, the former “sovereign” and the latter “corporate”. Crossing this information with the information on sectors of investment, it is clear that the investments in Qatar, which alone account for 4.8 billion euros, are most likely related to the export in the field of “defence” (which accounts for 34% of the total volume). Although more detailed information is unavailable, it seems likely that this deal involved Leonardo and Fincantieri, who were part of an agreement to modernize Qatar’s defence system (Leonardo, 2018). Considering that, over the years, the marine economy, infrastructure, aviation, Oil&Gas sectors are all remarkably represented in SACE investments, it can be guessed that this export activity is particularly important for state-owned enterprises, who are very well present in these sectors. Whether there was coordination in how the “Export Hub” was designed and the SOEs within CDP, is difficult to tell from the data at hand, but this seems likely to have been the case.

What is of relevance here is the combination between government goals and the developments at the macroeconomic level. In fact, the project of fostering export and internationalization, together with the crucial priority of scaling up, came in a period when Italian companies struggled to rely on the internal market for growth. The construction sector is perhaps the most spectacular case in this respect, but the same applies to the other industrial sectors. The connection between the change in the structure of demand for Italy and the strengthening of the export and internationalization functions of state finance

is here thus particularly visible and acquired a political relevance that contributed to the change of CDP management.

7.6.3) The Italian shareholder state 2.0

Perhaps the most considerable development is the strengthening of the role of CDP as a holding for state shareholdings, both directly and through its subsidiary Fondo Strategico Italiano (FSI): a vehicle owned by CDP but also participated by other private investors. Already in 2014, the MEF expanded the perimeter of action of the FSI to companies of “relevant national interest” and to large companies which, even though not having their headquarter in Italy, had large subsidiaries on the national territory. The FSI was then split in 2016 between CDP Equity (under the control of CDP) and the “Fondo SI”, the latter of which became the largest Italian investment fund, where CDP held 39% of the shares. The logic underlying this fund was the creation of a large private equity player which would invest in companies of strategic importance for the Italian economy (Interviews 44, 45).

Part of this investment is carried out through funds or funds of funds targeting the midcaps, in order to promote the scaling up of the invested companies and thus aggregation at a sectoral level (e.g. IQ Fund, FSI Mid-Market Growth; FII SGR). These funds are administered in a decentralized manner and apparently of little political relevance (Interviews 43, 44, 45, 49).

However, an important, and politically more contested part of this equity activity is constituted of direct interventions whereby FSI/CDP Equity directly invest in company stakes either with a minority or controlling share, in order to strengthen their financial and market position and thus create established international players.

The table below shows a list of the main acquisitions undertaken by FSI and CDP Equity over the period 2012-2017, with the goals of the acquisition according to available information.

Year	Invested company (Sector)	Total % acquired	EUR (mln)	Notes
2012	Kedrion (Biopharma)	25.1%	100	Investment aimed at promoting the growth in size of the company and reinforcing its capital structure. (FSI, 2012)
2012	Metroweb (telecommunications)	46.2%	198.7	Investment aimed at providing additional resources to finance the development plan of the company (FSI, 2012)
2013-2014	SIA (digital payments)	49.9%	281	Goal to create a big market leader in the field of digital payments also by promoting aggregation of smaller companies (FSI, 2013).
2013	Ansaldo Energia (Energy machinery)	84.5%	657	Investment with the goal of promoting company expansion and financial stabilization. Unstated but likely goal to avoid a looming acquisition by Siemens (La Repubblica, 2012).
2013-2014	Valvitalia (producer of components for Oil&Gas)	49.5%	151.2	Big player in the field of components for valves used in oil&gas, electricity generation and shipbuilding. Investment aimed at promoting the stabilization of shareholding and the dimensional and product expansion of the company (FSI, 2013; CDP Equity, 2018).
2014	Inalca (livestock farming and meat)	28.4 %	165	Investment aimed at the company expansion by acquisitions and foreign expansion. (FSI, 2014)
2014	Trevi (infrastructure and energy)	16.9%	101	Investment aimed at promoting the expansion of the company (FSI, 2014).
2014	Rocco Forte Hotels (Tourism)	23%	82	Investment in the context of an investment plan focused on Italy. Part of the “Pole for Tourism” promoted by CDP (FSI, 2014)
2015	SAIPEM (Gas & Oil)	12.5%	902.7	Transferred from ENI Spa.
2016	Poste Italiane (logistics and postal services)	35%		Ceded by the Treasury
2015-2016	Open Fiber (telecommunications)	50%	106	Second shareholder: ENEL (50%). Intervention for the acquisition of Metroweb
2017	Elite Spa (consultancy)	15%		Society for consultancy of SMEs
2017	Bonifiche Ferraresi (Agriculture)	20%	50	Investment aimed at consolidating the position of the largest Italian player in the agricultural sector at the national level and promote its foreign expansion (CDP, 2017b)
2017	TH Resorts	45.9%	20	Investment aimed at supporting the company expansion with the ambition to make it the market leader in sector, and promote domestic player vis-à-vis the entrance of foreign players in the domestic (CDP Equity, 2018; Il Sole 24 Ore, 2020b)

Table 8: CDP direct shareholding in corporations (CDP Annual Reports 2013-2018; CDP Equity Annual Reports, 2017-2019; FSI Annual Reports, 2013-2015).

There are a series of interesting aspects that emerge from the table. First of all, the investment interventions are very heterogeneous in terms of sectors covered and it is hard to distinguish a clear pattern. Even in the initial setting up of the fund, the stated focus was on the mechanical sector, tourism, design and distribution (CDP, 2014). The first joint venture established, IQ Made in Italy Investment Company Spa (IQ), had, in fact, a large spectrum of potential sectors, including food and beverages, fashion and luxury, furniture and design, free time, tourism and lifestyle.

However, it may be interesting to notice that the relatively larger share of 29% is held by Energy and infrastructure companies in fields (e.g. Oil&Gas, infrastructure, energy generation) that are strictly connected to the already existing state-owned enterprises (Figure 86). Whether this is due to an advocacy role or exchange of expertise that was facilitated by SOEs themselves is an aspect that I could not investigate in this research and for which further empirical evidence is needed.

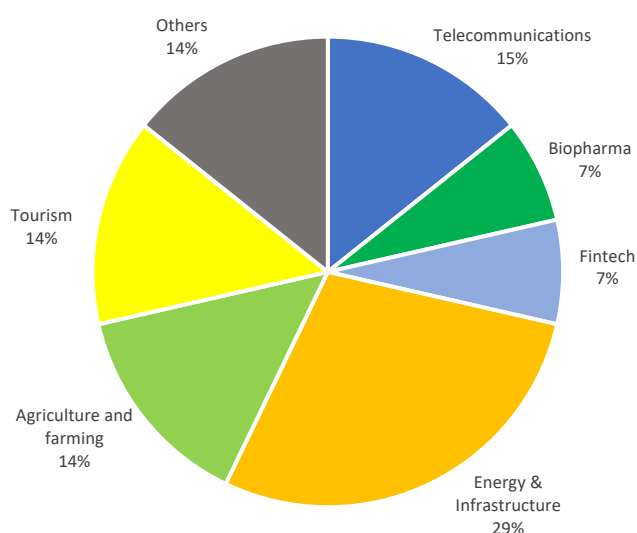


Figure 86 CDP shareholding interventions by sector (own calculations based on: FSI Annual Reports, 2013-2015; CDP Equity Annual Reports, 2016-2018)

Second, aside of some strictly “vertical” interventions such as that in tourism, biopharma and agriculture, half of the investments here has to do with sectors that provide “horizontal” benefits. For instance, the interventions in Open Fiber and Metroweb were undertaken with a logic of facilitating the crafting of large players that would invest in the Italian digital infrastructure. Although apparently vertical, these can be considered to be part of a more horizontal conception of industrial policy, since the focus is not on the sector per se, but on its potential spillovers for other sectors.

Third, the goal of these operations is almost univocally to promote the expansion and internationalization of these companies and, most importantly, to give them the scale to become dominant in their sector. The contribution to the definition of this goal apparently also came from the

“demand” from companies. More precisely, discussing the process of setting up the initial investments of the funds, CDP reported:

“The requests so far collected are centred on the idea that FSI can play the role of “facilitator” in the process of aggregation or creation of company hubs, such as in the field of public services, in the financing of companies attempting to acquire competitors abroad or who intend to create international distributive networks” (CDP, 2014: p. 66)

Fourth, the timing of the interventions is particularly interesting. The interventions in tourism and agrifood were both initially undertaken in 2014, at the time of the Renzi government, and then saw some follow up in 2017, after the resignation of the Renzi government. This aspect leads to a fundamental question: are these interventions politically demanded or left to the independent initiative of CDP and its funds? The evidence that I have gathered points to the fact that the logic underlying these investments is mixed (Interviews 43, 44, 45, 46, 49, 50).

There are some interventions that are strongly advocated for by the government and where the system of state-owned enterprises seemed to provide a support in terms of finding options. Telecommunications is a case in point, and especially Open Fiber, which was a spinoff from ENEL dedicated to the buildup of the optic fibre infrastructure in Italy especially in areas that are underserved, thus circumventing the problem of reliance on the privatized Telecom (Il Fatto Quotidiano, 2016).

Conversely, other projects were managed at the discretion of the funds and CDP managers. An instance in this respect is the investment in INALCA, that was apparently of little political relevance (Interview 49). Also, the investment in the two tourism companies seems to have been not so much motivated politically, but rather part of the “Pole for tourism” project of CDP, whose relation with the political decisionmakers is rather unclear.

As will also be further expanded in the next chapter, what emerges is a process of interactive influence whereby CDP aids the government’s interpretation of certain tasks and suggests both the goals and the way to achieve them.

Overall, this brief review of the CDP direct intervention is instructive in many respects, but specifically for two reasons. First, the big “economic” challenge that the shareholding function of CDP fulfils is the scaling up and internationalization of national players that could not win this game alone. Second, the origin of such ideas is a hybrid between government projects and the initiative of the bank managers, who manage to give some consistency to such projects and attempt to make them survive beyond the government term (Interview 46).

The Italian newly developing shareholder state thus carries some similarities with its previous version of the Fordist period, but also radical differences. The most important difference is the lack of a

consistent developmental project underpinning it, or at least of shared objectives over time. This opens up space for discretion for bank managers.

However, there is another logic that emerges both from the documentary and interview material, namely the logic moving the management of CDP and the enterprises it owns. Some form of at least loose coordination and exchange seems to have been developed as an effect of using CDP as a holding for state-owned enterprises (Interviews 46, 48, 49).

As mentioned, part of this evidence is related to the shares that the sectors of SOEs occupy in the overall export finance. Per se, this would not be excessively surprising, since these are typical export finance sectors, as already seen in the German case of shipbuilding⁶⁶. However, the difference with the German case seems rather clear, and there was no stepping back of the bank when it came to supporting Fincantieri and the sector at large.

“The cruise ship sector keeps being influenced by productive overcapacity, with consequent tension on prices and necessity of more intensive use of export financing” (CDP, 2014: p. 67).

In this respect, CDP played a role of patient investor and policy advocate supporting Fincantieri, even temporarily at loss, and ensuring they pursue a viable industrial plan. It seems thus fair to assess that the ownership of certain companies may have affected the sectoral priorities of CDP. The shipbuilding sector, for instance, is mentioned in several documents as strategic.

“The financial support of the CDP Group favoured the development of important Italian companies in strategic sectors like shipbuilding, naval and petrochemical” (CDP, 2017a: p. 57)

In 2013, despite a steep crisis of the shipbuilding sector, Fincantieri could undertake one of its largest acquisition operations, by buying 56% of VARD. This allowed Fincantieri to double its dimensions to 20 thousand employees, becoming one of the four largest shipbuilders in the World. It is hard to say whether the “shield of CDP” allowed Fincantieri to have an easier way to undertake this acquisition, but it is plausible.

This would lead to wonder whether this role of CDP as patient investors also comes with a role of policy advocacy when it comes to industrial policy.

For certain, the government seemed to have paid strong attention to the unfolding of events in shipbuilding. In this respect, it would be relevant to understand whether the 5.8 billion euros-worth order for warships that was placed in the Budget Law 2014 was an effect of a joint advocacy effort of CDP

⁶⁶ Comparisons with the German case should be done with caution, since Germany experienced a particularly steep crisis in shipbuilding especially due to its very high specialization in merchant ships. Whether the financial firepower to sustain the Italian and German sectors would have been comparatively similar is beyond the scope of this work.

and Fincantieri to obtain counter-cyclical orders for a company in temporary financial difficulties and that, in 2013, reported a negative financial position of – 155 million euros (CDP, 2014; Fincantieri, 2014).

Another instance of ad-hoc regulation that appears particularly interesting is the CIPE deliberation n. 51/09.11.2016, whereby SACE was allowed to expand its operations and insurable risks also in the sector of cruise ships. This piece of regulation allowed Fincantieri to obtain a guarantee by SACE for a large order.

Another action proving coordination is the creation of “Risparmio Holding Spa”, a financial vehicles co-participated between CDP and Poste in order to participate to a competitive bid by Unicredit for the cession of Pioneer: an equity fund (CDP, 2017a).

For certain, it appears at many levels that CDP started structuring also its organization as a fully-fledged holding.

Moves in this direction may be the centralization of the treasury management of CDP Group in 2013 (CDP, 2014). Moreover, industrial companies started having a very big impact on the final operating profits of the holding. For instance, in 2017, the flow of dividends amounted to 1.3 billion euros, 749 million of which by ENI, 150 million by SACE, 251 million by CDP Reti and 178 million by Poste Italiane (CDP, 2018)

As will be detailed in the next chapter, this will lead to the gradual development of a sort of “decentralized industrial policy” as an effect of the interaction between the political level and the system of state-owned enterprises. In lack of national consistency over industrial policy, state-owned enterprises would start becoming “agenda-setters” and contribute to the definition of some goals and coordinate over shared projects and interests.

7.7) Conclusion

This extensive recount of the Italian post-crisis period has shown contradictory tendencies across sectors, as well as important developments in the reactions of the state.

Italian automotive has continued its slipping towards the path to peripheralization, with a continuous but gradual detachment of FCA-FIAT from the national system, which was only very shortly paused during the Renzi government. The construction sector has seen an unprecedented decline due to the post-2011 austerity policies, which led to a dramatic cut in the number of companies including the largest knowledge-intensive players. The steelmaking sector persisted in its crisis trajectory and failed to obtain compensation for the rising energy prices. Moreover, the crises of large sectoral players led to a direct

and confrontative interaction between industry and the governments, which impeded the formulation of a common industrial policy plan. The chemical sector seems to be the one to have most successfully overcome the crisis period. However, the crisis hit especially the largest players in the industry, which were also the most important in systemic terms and the most exposed to price competition stemming from the rising global capacity in basic chemistry.

The state intervened in this period across two different but intertwined tracks. On the one hand, the government tried to relaunch a larger industrial policy plan, although overwhelmingly of an horizontal type, aimed at providing widespread benefits to businesses and, above all, rising productivity. On the other hand, the government more directly intervened vertically into CDP to redefine and expand its role and functions. CDP became certainly more “political”. However, the bank also built in this period its own capacities which allowed it to obtain larger discretion *despite* the rising politicization. We thus see forms of developmental or industrial policy that look in all respects vertical like, for instance, the intervention to promote the expansion and consolidation of Bonifiche Ferraresi. However, these forms are as vertical as they are decentralized, in that political motivation for these is weak or absent.

The post-crisis period also gives a specific view on how the broader competitiveness crisis has accelerated the process of disembedding of Italian corporate players from the national system. This nevertheless depended considerably on their dependence on the internal market. In fact, the steelmaking industry has exerted the “voice” option decisively in order to change the government policy line, although the government did not appear to be particularly receptive to industrial demands.

Considering large players, it is interesting to observe how the process has unfolded differently in different sectors. Although Versalis and FCA are not comparable in terms of sectors and of size, I still consider the comparison to be useful. In the Versalis case, ENI clearly wanted to deeply restructure and probably sell the company, but state ownership was a strong embedding device that made so that, even when trying to sell, ENI would pose some “red lines” regarding the holding of important rights in Versalis, even in the event of an acquisition by a foreign partner. The mechanism of state ownership, in the Versalis case, created an embedding device even when the government was endorsing ENI strategy to sell its chemical business, in that pressure from civil society and the parliament mounted especially because of ENI being a state-owned enterprise. In this way, ENI was to a certain extent “forced” to find an industrial plan to reconvert Versalis and to act as a patient investor. Ownership power (Bulfone, 2017a) seems thus to be working as an embedding device towards large corporations.

Conversely, FCA fully exploited its exit options and engaged only in patchwork coordinating attempts with the government, which were nevertheless short-lived. The government attitude towards FIAT was fundamentally to try to grant at least some concessions to the company, in order to obtain some investment commitments. Although this chapter has not dealt with the extensive topic of the *Jobs Act*, the extensive labour reform approved by the Renzi government, it is sufficient to mention here that it addressed most of the points on the flexibilization of labour for which FIAT engaged in an overt conflict

with Italian trade unions. Above all, the popular *Article 18*, which ensured that a worker fired without a justified reason should be reinstated in the workplace, was weakened to the point of being basically abolished.

Eventually, it is worth observing that the changing structural conditions of the Italian economy have had a considerable effect on industrial policy priorities, although not in a sectoral sense. The post-crisis period was featured by an unprecedented focus on the promotion of internationalization of domestic companies, as seen in the emphasis put by the Renzi government on the “Export Hub” as well as in the sustained support to internationalization and export of this period. In this respect, the shift of the Italian growth model from a “domestic demand-led”, to a “very export-led” path (Baccaro & Hadziabdic, 2022) was paralleled by a conscious political decision to help companies grow out of internationalization.

This reflected an already ongoing strategy by domestic companies, even in the construction sector, who dealt with the collapse of internal demand by looking for revenues abroad, which also implied internationalization projects.

CHAPTER VIII

Steering without a compass: Italy and the struggle to develop a strategy

The previous chapter recounted the story of how the Italian post-crisis state attempted to decelerate the ongoing industrial decline relying on limited financial means. At the same time, governments did not display will to engage in sectoral policy and the post-crisis industrial policy was overwhelmingly the management of individual company crises and their occupational consequences. The only overt attempt to relaunch an industrial policy strategy, the Industria 4.0, was overwhelmingly horizontal and aimed at stimulating investment and increase productivity by means of digitalization and machinery upgrading. The two factors that seem to have accounted for this decline in sectoral targeting are the scarcity of players of critical size, as well as the heterogeneous sectoral composition of the Italian economy (Interviews 52, 53, 49, 50, 70). Decision makers spoke in favor of relaunching specific sectors only in the context of individual company crises (e.g. in steel), but action was seldomly taken to devise larger plans. Moreover, the detachment of the national champion FIAT from the Italian system also led to a gradual disengagement from automotive (Interviews 50, 62). Eventually, the politics of budget moderation also constituted a strong constraint on the spending capacity of the Italian state.

In the meantime, the Italian political system fell victim of the social drawbacks of the politics of fiscal repression. In fact, this third chapter on the Italian case starts right at the 2018 elections, when the Five Star Movement placed itself as first party with the 32 % of the votes, while the Lega obtained 17%. With two allegedly anti-system parties representing 49% of the voters, the defeat of the Italian political establishment was now an inevitable reality, to the extent that media would claim the beginning of a “Third Republic”⁶⁷.

The 2018 elections constituted a turning point for Italian economic policy, which would make its overall path more erratic and even less predictable than it was the case before. This was due to the fact that the raise of the anti-system political parties gave the anti-austerity and more economically interventionist parties real chances to influence the policy process.

The first Conte Government marked factually the beginning of this process of rupture with the previous paradigm. The government was the result of a complicated round of political bargaining, after which an “unconventional alliance” between the Five Star Movement and the Lega could agree on a common program committed to break with austerity, revert some previously undertaken pension reforms and introduce a new poverty subsidy, the *reddito di cittadinanza*, aimed at providing at least a baseline subsidized income for those families and individuals close to the poverty line. While the Five Star

⁶⁷ The reference is to the „Second Republic”, a term commonly used in the Italian debate to define the party system that emerged after the corruption scandal “*Mani Pulite*” and the subsequent electoral upheavals which led to the demise of the Post-WWII party system.

Movement leaned more decisively towards the left, the Lega constituted the right-wing of the center-right coalition. What however was the common ground between the two was the idea that the old austerity and economic policy paradigm should be left to the past.

The period that opens with the 2018 elections is thus featured by a rise back to salience of an ideational cleavage that we may define between “market liberals” and “developmentalists”. While “market liberals” advocate for a continuation of the post-crisis market-based industrial policy approach, based on horizontal measures and leaving development to the play of market forces, the “developmentalists” pursue the idea that the state should take a role of leadership and orchestrator of economic development, setting societal priorities (Interview 50). Although this is not necessarily to be meant as a strict division, the overall tendency is of politicians and public officials to adopt one of these two perspectives. In the Italian case, the clash between these perspectives stems from the highest political sphere, then influencing the administrative machine and the state-owned enterprises.

Two developments will be highlighted in this chapter. First, the post-2018 industrial policy approach has become more erratic and strongly influenced by individual governments, although with some signs of continuity. The conflict between developmentalists and market liberals has thus not been settled. Second, a sectoral focus kept missing and the political priorities in terms of sectors will be victim of political instability. This is due to two main factors. On the one hand, the heterogeneity of the Italian economy made the identification of core sectors much less established than it was the case for Germany. Therefore, a “hard standard” on which sectors to target was missing. On the other hand, the lack of very large industrial players has hindered to this day the coordinating capacity of the Italian state and of employer organizations that have lost a considerable part of their capacity to keep the employers’ side united. To a certain extent, state-owned enterprises managed to fill this gap by acting increasingly as agenda-setter in industrial policy.

The short but dense timespan that is considered in this chapter makes so that the structure will be slightly more erratic than what observed in the previous two chapters. This is due partially to the high dynamism and frequency of political alternation in this period of time. Therefore, I will begin by highlighting the general policy approach of the 4 governments that alternated to power between 2018 and 2024. It is perhaps banal to anticipate that the short time in charge of each of these governments makes it difficult to give a clearcut answer regarding their policy approaches to begin with, although some underlying patterns and ideas can be easily extracted. Then, I will dedicate a section to the role of the system of state-owned enterprises. Although it would have been possible to incorporate this part with the narrative on governments, I considered the role of state-owned enterprises to deserve a specific section, in light of the specific features and influences it has on industrial policy broadly considered.

After this, a series of sections will be dedicated to how state intervention has unfolded in the chemical, steelmaking, automotive and construction sectors. I will then conclude with an overall consideration on

the Italian case and how its development over time instructs us on industrial policy in contemporary political economies.

8.1) Cautiously developmentalist: the redeployment of state finance under the Conte governments

It is apparent that industrial policy did not carry a very high priority in the policy agenda of the first Conte government, which was overwhelmingly concerned with the pension reform and the *Reddito di Cittadinanza*. The controversy and budget-heaviness of these reforms made so that political bargaining and leverage would be used overwhelmingly for pushing them forward, especially in light of their very high political salience.

Despite a surface of stability, however, sweeping changes were ongoing at least in the instruments and the governmental approach to industrial policy.

8.1.1) Changes at the top: the contention over the CDP top managers.

Although, as seen in the previous chapter, industrial policy was coming back to fashion already in the times of the Renzi government, the two Conte governments have gone one step further. Most importantly, the industrial policy approach became more vertical and developmentalist. Not only there is a state that invests in measures for the general improvement in productivity and competitiveness (horizontal), but now it also tries to strategically identify where and how to intervene (Interview 50).

In this, the apparatus that over time was built around the Cassa Depositi e Prestiti as a holding for state-owned enterprises came as particularly handy. What we observe here is not a dramatic change or strengthening in the instruments of state holding, but rather a utilization of what was already built in different ways.

Did this imply a more intrusive approach of the government vis-à-vis the governance of the bank? Yes, but not necessarily more than what seen in the Renzi government. It will be recalled that it was reported that “[t]he more “populist” the government, the more they would try to have a say on the bank management” (Interview 44)

This implied that the government would not limit itself to nominate the CEO, as previously happened, but it would increasingly intervene to influence other appointments of figures who were “second in charge”. Referring to the Conte and Meloni governments specifically, a further observer argued that the

risk of political interference in CDP and the state-owned enterprises at large has increased over time with the most recent “rise of the populist governments”.

However, such influence is to be seen more in qualitative terms than in quantitative ones. Figure 87 shows the mandates for CEOs of the main state-owned enterprises and their overlapping with all the governments since 2005.

	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Government	Berlusconi III	Prodi II		Berlusconi IV			Monti	Letta	Renzi	Gentiloni	Conte I	Conte II	Draghi	Meloni						
CDP		Del Fante					Gorno Tempini			Gallia		Palermo		Scannapieco						
ENI				Scaroni										Descalzi						
ENEL				Conti									Starace						Cattaneo	
Fincantieri							Bono												Folgiero	
SNAM	De Feo			Malacarne									Alverà						Venier	
Terna				Cattaneo						Del Fante			Ferraris		Donnarumma				Di Foggia	
Finmeccanica / Leonardo				Guarguaglini				Orsi	Pansa	Moretti				Profumo					Cingolani	

Figure 87 Governments and managers of SOEs since 2005

What can be noticed is that the government to replace the most administrators of SOEs was the Renzi government, replacing five out of the seven included in the figure. Conversely, the two Conte governments replaced only two, and the Meloni government five. The tendency of the government to be “activist” in appointments, was thus established already at least since the Renzi government. Such influence that is reported is thus to be interpreted qualitatively, namely in the growing interest that governments have had for CDP and SOEs as developmental instruments.

The case of CDP stands out as particularly interesting for two reasons. First, CDP appointments have been particularly political due to its role as a “long hand of the state” and as a mobilizer of a remarkable off-balance sheet financial firepower (Interviews 49, 50). Second, CDP is also a holding of considerable shares in other state-owned enterprises of strategic importance (e.g. ENI, Fincantieri), and is thus able to influence their governance.

“This thing makes so that there is even one more layer dividing the politician from the public enterprise management, which avoids the risk of undue political influence” (Interview 49).

For this reason, the appointment of CDP’s CEO would be subject, since the Renzi government, to particularly strong political struggles, which became more intense the more extensive the involvement of CDP with industrial enterprises became.

CDP thus became subject to power struggles over its governance, where the controversial issue was the developmentalist or “market-residualist” role of the bank. Such divergences do not necessarily overlap with the left-right political divide.

The contrasts over the appointment of the CDP CEO during the first Conte government is a case in point. In this case, the dispute was not between the two coalition partners, as it would be expected from an “electoral” perspective, but rather between the coalition partners and the Minister of the Economy and Finance, who also controls the MEF, which is the CDP official shareholder. The appointed MEF Minister, Giovanni Tria, was an external figure to politics and had an academic background, rather than a political one. He can thus be defined as a “technocratic” figure, albeit one that is also external to the circles of economic governance of the MEF and the Bank of Italy. His appointment was the result of a political crisis that erupted when the President of the Republic rejected the proposal of the Lega candidate Paolo Savona, considered to be too eurosceptic. Tria was thus in the uncomfortable situation of having been appointed against the will of the government coalition partners, and of being a technocrat tasked with keeping the government in check. This without having the bureaucratic networks of the Italian machine of economic governance at his disposal.

The appointment of the CDP CEO turned thus into a government crisis due to a contrast between Conte, backed by The Five Star Movement and the Lega, and Tria. While Conte advocated for the appointment of Fabrizio Palermo, financial director of CDP and former public manager in Fincantieri, Tria pushed for Dario Scannapieco, former vice-director of the European Investment Bank (EIB) and close to Mario

Draghi (Il Sole 24 Ore, 2018c). In this fight, the Democratic Party defended the MEF Minister (Il Sole 24 Ore, 2018k). Eventually, Tria had to concede defeat on CDP in exchange of a free hand on the appointment of the General Director of the Treasury (Il Sole 24 Ore, 2018c).

The reason for which this contrast on the appointment of the CDP CEO is relevant is that it was the manifestation of a deeper type cleavage between the “liberal” and the “developmentalist” view on economic policy. In this respect, Palermo embodied a conception of CDP that envisioned it as an active player in promoting economic development or, as some put it, as a “New IRI” (Interviews 50, 62). The intention of relaunching CDP as a developmental instrument was especially pushed by the Five Star Movement as part of the “government contract” (*Contratto di Governo*) agreed between the party and the Lega (Il Sole 24 Ore, 2018c; M5S, 2018). The “contract” does state the need for a “bank for investments” operating under the MEF and financing SMEs, initiatives of public and strategic national interest, export and project finance, development finance and innovation (M5S & Lega, 2018). Fundamentally, the reference is to CDP without mentioning it.

The Palermo administration took office with this kind of developmentalist idea on the role of the bank in mind. At this stage, therefore, the contrast between the “developmentalist” and the “market liberal” orientation was won by the former. In fact, the Palermo period was by different sources considered to feature strong discontinuity with the past (Interviews 50, 44, 43, 45).

There are many hints to the fact that this change raised some opposition. Beyond the struggle between Tria and Conte over the nomination of the CEO, the other players to be considered are the “banking foundations” who should be, at least theoretically, the guardians of the market profitability of CDP. Some observers have seen the MEF-induced increase in the dividend payout from CDP, right before the change of administration, as a move to make the foundations more complacent to new potential changes (Il Sole 24 Ore, 2018a). The idea of using CDP as an ATM against public debt was however not new and dated back already to Renzi, who proposed to use CDP to make revenues out of selling public real estates, as well as shares in state owned enterprises (Il Fatto Quotidiano, 2018). Moreover, the appointment of Gorno Tempini (former CDP CEO) as President was seen as a counter-balancing to the Palermo administration, since Tempini was more eager to defend the market unit nature of CDP (Il Sole 24 Ore, 2019j).

Eventually, consensus was thus crafted in order to promote change in the governance of the bank and thus a new course.

The Palermo administration was thus featured by an idea of the bank as a long-term investor, eager to hold strategic shares in a long-run industrial perspective (Interview 50). This idea of developmental state, according to which CDP should play a role of long term investor not only for the most traditional state-owned enterprises (like ENI and Fincantieri) but also for the more recent acquisitions, went hand in hand with the government orientation (Interview 50).

This was expressed first of all by an organizational change, namely the repositioning of the CDP shares in Fincantieri and SAIPEM under “CDP Industria”, a subsidiary of CDP which was tasked with holding shares of companies in a long-term in an industrial perspective.

Beyond the flagship project “Progetto Italia”, which will be discussed more extensively in the next section, the Palermo administration also increased state presence in the Telecom Italia capital from 4.9% to 9.9%, in continuation with a trend which already begun before the intervention in the telecommunications operator for promoting the national broadband network.

Furthermore, some projects were initiated during the Palermo administration were aimed at creating important national players in sectors that were strictly related to other state-owned enterprises. For instance, the SNAM subsidiary SNAM4Efficiency was split from the main company to create, in 2021, Renovit, with a 30% of participation by CDP Equity. The goal here is to create a national player in the field of energy efficiency for residential and industrial buildings. Furthermore, it is highlighted that the new company can have an important contribution for the energy efficiency plan of local municipalities, creating synergies between the traditional financial expertise of CDP regarding municipalities and the industrial focus of SNAM (CDP & SNAM, 2021).

Another similar project is GREENIT, a new company established by ENI (51%) and CDP Equity (49%) oriented towards the development, construction and management of plants for the production of renewable energy, especially wind and solar power. Beyond targeting an industrial goal, the plan also allows ENI to further diversify its activities away from fossil fuels (ENI & CDP Equity, 2021).

In this period, CDP also played a role of promotion of national champions in the financial sector, for instance with its brokering of the merger between SIA and Nexi to create a strong fintech player in the field of digital payments in Italy. Currently, CDP is the second largest shareholder of Nexi, with a share of 13.5%, second to the the American private equity fund H&F (19.9%). Together with Poste, the total participation of the state-owned enterprises to the company is 17.09% (Nexi, 2024). Moreover, recently CDP is considering the acquisition, from NEXI, of the strategic infrastructure for the Italian interbank market (Il Corriere della Sera, 2024). Moreover, it is during the Palermo administration that CDP decided the acquisition of 7.3% of financial player Euronext, operating the stock exchanges of several European markets, in order to complete the acquisition of Borsa Italiana from the London Stock Exchange (CDP, 2021b). This allows the Italian government to keep under check another critical infrastructure and to become the largest shareowner of Euronext together with the French state bank Caisse des Dépôts et Consignations. This crafting of strategic players in the financial sector continues, to a certain extent, a tradition persisting since the early banking privatizations (Deeg, 2012; Culpepper & Tesche, 2021).

Cooperation of SOEs within the CDP umbrella on individual projects, which was already happening before the Palermo administration, continued and even became more established. The example of GreenIt and Renovit was already mentioned. Beyond this, the *CDP Energia e Digitale* program coordinated ENI, SNAM, SAIPEM and Fincantieri in projects regarding the energy and digital transition. There are several instances of such programs being undertaken in this period. For instance, a framework agreement was concluded between CDP, ENI Fincantieri and Terna to develop plants for the production of energy from sea motion (Il Sole 24 ore, 2019a; CDP, 2019a). Other similar collaborations between SOEs were set in motion in fields such as dockyard infrastructure, new technologies, energy efficiency and engineering (e.g. CDP, 2019b)

Of remarkable importance are the new projects in the field of hydrogen. ENI and SNAM also started outlining, in this period, programs to strengthen the hydrogen productive capacity and supply chain (CDP, 2021a). SAIPEM and SNAM engaged more intensively with hydrogen and, in 2021, they contributed to set in motion the Green Hydrogen Valley in Apulia, the first large project to create a hydrogen supply chain and production plants in Italy (Edison et al., 2021).

It was also during the Palermo administration that SACE saw one of the most sweeping reforms of its history. We saw in the previous chapter that the Renzi government and the previous CDP administration made so that SACE would be incorporated in CDP in order to create an “Export Hub” with SIMEST. It was also shown that SACE mobilized a growing number of resources in that period, especially for projects related to export and internationalization. During the Conte governments, SACE saw a further expansion of its functions. In the context of the measures to counter the economic effects of the pandemic, the Conte II government gave SACE the possibility to provide guarantees not only for international operations but also for the internal market, through the measures *Decreto Liquidità*, *Decreto Rilancio* and *Decreto Agosto*. After these measures, SACE could provide guarantees until 200 billion euros through the program *Garanzia Italia*, and a state-backed insurance was provided also for short-term credits, covering until 90% of the credit volume. The volume of guarantees provided through the program amounted to 12 billion in 2021, and 11 billion euros in 2022, in the context of its extension due to the energy crisis.

After the pandemic, the tendency has been to redirect SACE increasingly towards the internal market, although this was not associated with a reduced relevance of its role for internationalization and export (Interviews 47, 48). Furthermore, it is also noticed that, with this new extension of SACE activities, the “sectoral” direction of the company was also strongly diluted, since now the tool is more generalized than before (Interview 48). In this respect, the real innovation of the last period has been the stronger coverage of small and medium enterprises through the newly introduced guarantees.

However, this new orientation was also accompanied by the MEF re-taking ownership of SACE from CDP. As a consequence, the previously established Export Hub was dismantled, and with it all the related synergies it created between SACE and SIMEST (Interview 48). In fact, the Hub made so that comprehensive export credit solutions could be offered, including a guarantee part (SACE) and a direct lending or equity investment part (SIMEST).

It should also be noticed that the introduction of these new powerful instruments during the pandemic has also led banks to increasingly rely on them also for operations for which they would have previously taken up risk. In this respect, a distinction is traced between the *Fondo Centrale* during the Renzi government and the current system. Now the tendency of banks of using this instrument structurally has become more established, especially after the pandemic (Interview 47).

“Now banks are accustomed to it. If you get used to having the good life, it will then be unlikely that you will step back (...) banks solved a large part of their problems regarding their credit litigations” (Interview 47).

The issue is nevertheless not only related to risk, per se, but to the fact that, since SACE is a “sovereign guarantee”, banks can lend and have “zero weight assets” on their balance sheets, which means banks can free up more capital that does not have to be set aside for regulatory purposes.

“The guarantee that is provided by SACE is a sovereign guarantee and allows you to avoid to set aside money” (Interview 48)

After this brief review of the main changes intervened during the Palermo administration, part of which, like in the case of SACE, would remain in force also at a later point, I will now provide a general assessment of how the general industrial policy approach developed during and after the Conte governments.

8.1.2) Between developmentalism and caution: the two Conte governments

Although the changes in CDP governance were sweeping, the overall policy approach of the Conte government was far from being revolutionary, as will become clear for instance in the section on automotive. However, steps were undoubtedly undertaken towards a change in paradigm.

In the context of the ILVA bailout, former minister Patuanelli was provocatively asked by journalists if they intended to revive the IRI, to which he answered that *“if necessary, yes”* (Il Sole 24 Ore, 2019m).

The left-wing trade union CGIL endorsed the idea, stating that *"[I]t is undeniable that, to rebuild industrial policies, which are clearly stuck in a crisis today, it is necessary to establish an agency that, like the IRI, could revitalize the country's development."* (Il Sole 24 Ore, 2019m).

This was however far from being a consensus. In this period, Confindustria raised critiques towards the government, especially with respect to the planned reversal of part of the liberalization measures of labor legislation that were introduced during the Renzi government (Il Sole 24 Ore, 2018l). This confrontational attitude went to the extent of threatening to engage in demonstrations, a strategy that is very untypical for the employer association. More specifically regarding CDP, the Confindustria president Bonomi declared:

"The Cassa Depositi e Prestiti (...) is a financial powerhouse. (...) I wouldn't see a problem if these savings were properly used. However, given the show of recent weeks, the possibility that the Cassa Depositi e Prestiti might turn into a cumbersome state-run entity, well, I do have some concerns about that."

Moreover, he criticized the lack of focus of the lending institution:

"The problem, however, is that instead of refocusing on certain specific industrial sectors deemed strategic, the temptation is to further expand the already very broad spectrum of areas."

(Il Sole 24 Ore, 2018j)

Moreover, Confindustria also declared opposition to the re-nationalization of the Italian highways, after the catastrophe of the Morandi bridge in Genua displayed a complete neglect of the maintenance duties on the side of the private investor (Il Sole 24 Ore, 2018m).

Therefore, the general attitude of the business world towards the new orientation was a negative one, although it is unclear whether this was due to the general stance towards the Conte I government specifically, or whether it represented a more fundamental opposition towards the neo developmentalist project.

In 2020, the MISE ministry Patuanelli announced a *"Piano Italia"* that should have set a ten years plan for the Italian industry. The plan included automotive and construction as strategic sectors, which, by then had already some "Institutional Tables" of exchange opened at the MISE. Moreover, the plan entailed the transformation of ENEA into an agency for technological transfer (Il Sole 24 Ore, 2020d).

Meanwhile, the strengthening of the *contratti di sviluppo* and *contratti di filiera* as instruments of vertical industrial policy continued and it was extended to the agricultural sector, which also figured high in the priorities of the government (Interview 50).

The 2020 recovery plans for the Pandemic opened up a window of opportunity to deploy stronger financial firepower also for more targeted kind of policies, after the unprecedented relaxation of state

aid regulations. For a short timespan, the traditional pressure on the Italian public budget seemed to find some relief.

“At that timepoint there was factually no particular budget constraint, so it is hard to say [for the pandemic period, ed.] the extent to which budget constraints count for Italian industrial policy” (Interview 50)

It is certainly true that the pandemic led to more sweeping forms of intervention. During the emergency, the government created the *“Fondo per la salvaguardia dei livelli occupazionali e la prosecuzione dell’attività d’impresa”* (“Fund for the preservation of the occupational levels and the continuation of the business activity”), equipped with 750 million euros for the years 2020-2023 and managed through Invitalia (Il Sole 24 Ore, 2020g). The fund was aimed at rescuing and restructuring, through equity interventions, companies holding brands of historical national interest (even SMEs), as well as companies in financial difficulties with more than 250 employees. (Il Sole 24 Ore, 2020g; MISE, 2020). In this, it partially resembles the intention behind the *Wirtschaftsstabilisierungsfond* that we saw in the German case.

However, as a general rule, the Covid pandemic interventions did not have a sectoral nature, but rather a counter-cyclical one. When sectors were mentioned, these were mostly those, like tourism or the hospitality industry, that were most hit by the crisis. Looking at the composition of the state aid approved, it can be seen that, of the 326.7 billion euros made available for pandemic support, the 74% was dedicated to general purposes and the only targeted aids accorded regarded SMEs (9%), Large enterprises (13%), Tourism (1%) and Agriculture (1%) (elaboration on MISE, 2021). Ad-hoc company bailouts amounted to 360 million euros, 300 million of which to Alitalia.

It is also considerable that the *Garanzia Italia* accounted for 200 billion of the overall package, although, as seen, the factual use of the guarantee was much lower than this amount. Taking out the guarantees from the amount made available, 118 billion euros remain, 30% of which for general purposes, 25% for SMEs and 37% for large enterprises, while the strictly sectoral aids for tourism and agriculture stand at around 2% each.

This should not come as particularly surprising, since similar “general” packages were implemented elsewhere in a similar fashion in Europe. What however differentiates Italy from the German case is that the pandemic was not accompanied by more vertical supply-side projects of the kind seen in the Germany, for instance in automotive with the “Ziffer 35c” (*Zukunftsinvestitionen Fahrzeughersteller und Zulieferindustrie*). This is due to the fact that clearly such projects were not being planned before the pandemic to begin with, and there was no Italian equivalent of the *Nationale Industriestrategie 2030*.

Therefore, overall, the pandemic measures did not lead to some targeted forms of support and to exploit the opportunity to at least try to relaunch sectors in crisis. There is one exception in this respect, namely

the construction sector, which was target of the most consistent measures of support by the government, as we will see in the next subsection.

8.1.3) The brief rediscovery of the construction sector

The construction sector seems factually to have been the clearest sectoral focus of the Conte governments, both from the point of view of interventions on demand and interventions on supply.

On the demand side, the so called “Superbonus 110” was perhaps the most extensive stimulus package provided to the Italian construction industry in its history. In very simple terms, the state would bear the 110% of the cost of energy efficiency improvements undertaken by privates on their buildings of property. This triggered a very strong wave of investment for energy efficiency. The logic of intervention was basically related to the multiplier and the positive spillover effects over the economy overall (Interview 50). In this respect, there was also the expectation that the construction sector would become the engine of economic growth by means of its potential spillover on other “supplying sectors” such as steelmaking. This expectation was not completely ungrounded in that, for instance, the construction sector is the first costumer sector for Italian steelmaking, with a share of 20% of steel demand (CDP, 2024b).

A more “political interpretation” of the bonus is nevertheless also possible, namely as a way to give a rapid boost in demand and, at the same time, obtain broader consensus by the large and electorally influential stratum of homeowners in Italy⁶⁸. As a matter of fact, doubts have been raised regarding the idea that this was part of a broader vision regarding the construction sector:

“They remember the sector only when they want to obtain something, but this is not accompanied by a reasoning regarding a strategic plan for the sector” (Interview 54).

However, the goal to boost growth was without a doubt prominent and the construction sector figured already as an “official” priority in the Piano Italia (Il Sole 24 Ore, 2020d).

Interestingly enough, it was reported that the Superbonus was not designed in connection with the “Progetto Italia”, the main “supply-side” measure and flagship project of the Palermo administration in

⁶⁸ In this respect, it may be useful to point out that the potential redistributive benefits of the bonus, namely to allow disadvantaged strata to improve the energy efficiency of their old houses, was discouraged by the heavy bureaucratic burdens imposed to applicants. More in detail, the form of “tax credit” (*credito fiscale*) advantaged only the wealthiest taxpayers, the “tax credit transfer” (*cessione del credito*) implied that a bank would accept to become tax creditor in exchange of anticipating the whole amount, and the “invoice discount” (*sconto in fattura*) implied that a company would be eager to accept a tax credit instead of instant liquidity. Moreover, amendments to the original project included “second homes” to the bonus. Overall, the system was strongly skewed towards advantaging the small-bourgeois strata of homeowners, reason for which it can easily be interpreted as a gift to the petit bourgeoisie, which, in Italy, makes up a very large electoral stratum.

the field of direct shareholdings (Interview 50, 46). The two projects figured separately and not as a consistent industrial political plan.

The Progetto Italia was overtly aimed at creating a national champion in the construction sector able to compete at the global level. In fact, construction companies in Italy have been featured, in European perspective, by a comparatively much smaller size, especially in comparison to Germany (ANCE, 2024a). Salini Impregilo was, at the time of the Conte government, the largest Italian construction company and a major player in the field of infrastructure construction. However, the company was undergoing financial difficulties due to both the conjuncture and to some investments abroad that carried a high amount of risk. Although the EBIT was mostly positive, the net financial position of the company had worsened considerably in the late 2010s. By 2019, the net financial position had reached a negative low of roughly 900 million euros (Figure 88).

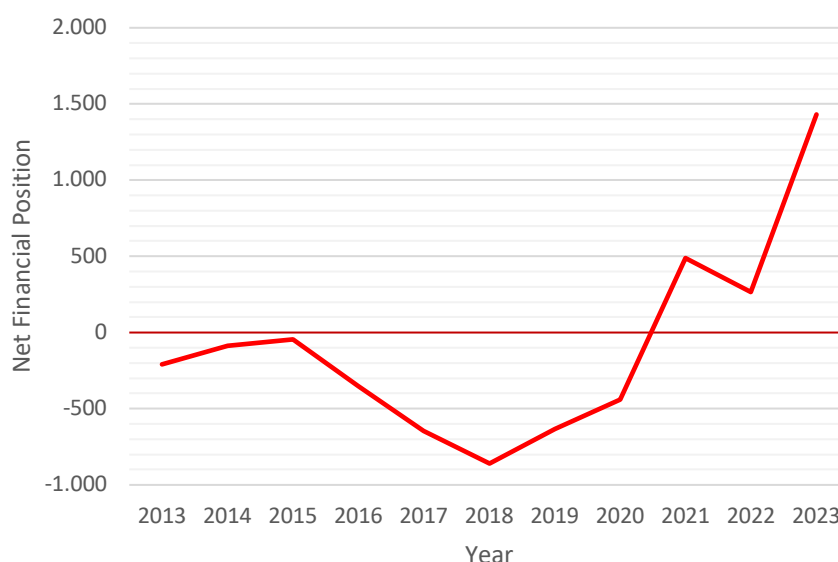


Figure 88 Net Financial Position of Salini Impregilo, then WeBuild, group (mln, EUR) (Salini Impregilo Annual Reports, 2014-2022; WeBuild Annual Reports, 2023-2024)

The process through which the intervention of public support to the company was decided is another interesting case of interaction between the autonomous role of CDP as a “designer” of policy interventions and the developmentalist orientation of the government. It will be reminded from the previous chapter that equity investment decisions of CDP are heterogeneous in terms of their “political” or “technocratic” origin. While some are parts of politically-driven projects, others are decided and evaluated at the discretion of CDP. In this case, sources agree that the Progetto Italia was strongly promoted by the government (Interviews 46). However, the Salini Impregilo case was being considered already before the Conte government and thus even this political project was, to a certain extent, co-constructed with CDP (Interviews 46, 50). This “dual origin” of the project is a hint to the importance

that the growing industrial expertise of the bank has in the practical execution of political projects, where politicians need hints regarding what the options available for intervention are.

In 2019, CDP participated, with 250 million euros, to a capital injection in Salini Impregilo, which included the acquisition of a 18% stake by the government and considerable governance rights on the company by CDP, including the right of the latter to appoint 5 members of the administration board and the president. The participation of CDP was aimed at promoting a fusion with Astaldi, allowing Salini Impregilo to become the largest group in Italy and the 11th at the European level (Il Sole 24 Ore, 2020h). By means of this successful merger, the company WeBuild was created, which is still to this day by far the largest Italian player in the construction sector and among the largest in Europe. Therefore, WeBuild continued an expansion policy to aggregate and grow in size (Il Sole 24 Ore, 2020h). This expansion also came with a dramatic improvement in the net financial position of WeBuild which, by 2023, scored its best historical result.

8.1.4) How much of developmentalism?

With this brief discussion of the construction sector, I conclude the general assessment of the Conte government policy approach. It can be briefly noticed that the most “vertical” initiatives of the government were those implemented through CDP by the Palermo administration, rather than the ministerial action per se. This leads to a few possible interpretations.

First, the fact that the construction sector was chosen according to effects on the broader macroeconomic growth (the multiplier) (Interview 50) and to the speed with which it allows to obtain such effects is an interesting fact per se, especially when considering that no other sectoral policies were implemented and that the sector was far from driving Italian growth in the post-crisis period. A possible interpretation of this was that, lacking the proxy of some driving core sectors, more “generalist” policies aimed at stimulating the internal demand come as particularly handy in the political toolbox of policymakers, especially when they come with high gains in terms of consensus.

Second, being industrial policy investment policy, it notoriously requires stability over time and personnel skilled and qualified for the supported sectors. Considering the speed of political alternation in Italy (between 2019 and 2024 Italy had 4 different Ministers of the Economy), there is clearly very little political input for continuity. It is indeed very frequently reported that there is a big problem of political consistency of the projects proposed (Interviews 43, 44, 50, 54, 63). This makes so that CDP plays a more important role in giving political consistency to such projects over time and thus is delegated tasks from the ministerial level.

We will reconsider the role of state-owned enterprises and institutions at a later point of this work. In the next section, it will be considered how the general industrial policy approach changed with the Draghi and Meloni governments, partially reverting the previous developmentalist orientation.

8.2) From market liberalism to mock developmentalism: the Draghi and Meloni governments.

After having shown the short-lived change during the Conte governments, I will now provide a narrative of the main developments regarding the industrial policy approaches of the two subsequent governments: the Draghi and the Meloni governments. We will see that the elements of novelty have been relatively few when considered in terms of general industrial policy projects or sectoral targeting. The most considerable stories of this part of the narrative emerge in relation to CDP governance and to the attempts to address the Italian sectoral crises in steel and automotive. I thus considered it appropriate to dedicate a separate subsection to the developments in CDP's governance, in light of the substantial continuity in the policy orientation of CDP during the Draghi and the Meloni governments.

In January 2021, the Conte government stumbled into its final crisis, when the political party led by Matteo Renzi, Italia Viva, withdrew its support. Left without a working majority, Conte resigned from the office at the end of the month. It is interesting to notice that the government crisis was paralleled by a temporary freeze of the CDP processing of some relevant projects related to shareholding, namely the internet infrastructure with TIM and the setting up of a joint vehicle with two American private equity funds for the acquisition of the highways network (Il Fatto Quotidiano, 2021)

Quickly, a new majority was found under the leadership of the technocrat and former European central banker Mario Draghi, supported by all the major political parties except of Fratelli d'Italia.

Although Mario Draghi most recently gained considerable media coverage as an industrial policy advocate, this stance should mostly be read in the European context. It may be useful to remind, in this respect, that the popular “whatever it takes” was a “whatever it takes to preserve the euro”. This helps make sense of the relative inertia of the Draghi government in industrial policy matters. As we will see in the next section, the attempt to paralyze the “developmentalist project” of the Palermo administration of CDP is the most visible manifestation of this trend. Moreover, Draghi also replaced the head of Invitalia Arcuri, a key cadre of the Conte administration.

Nevertheless, the Draghi administration also overlapped a period of industrial crisis where industrial policy would aggressively impose itself back on the agenda. The effect of the “spirit of the time” should thus not be neglected.

The crisis measures went primarily in the direction of targeting rising electricity and gas costs both for households and businesses. Specifically, the electricity and gas grids fees were lifted and energy-intensive companies were allowed a tax credit amounting to 25% of the electricity and gas costs incurred. For non-energy intensive companies, the allowed tax credit was 25% for gas and 15% for electricity⁶⁹. In September, the government further increased the tax credit support to 40% for gas, 40% for electricity for energy-intensive companies and 30% for electricity for non-energy intensive companies⁷⁰.

By October 2022, the cost of the measures for the public budget of the tax credit subsidies was estimated to be in total around 10 billion euros for the energy (gas and electricity) intensive industries and around 7.1 billion euros for other companies (Camera dei Deputati & Senato della Repubblica, 2022). The halving of the tax on gas consumption and the lifting of the grid fees costed 2.5 billion and 14 billion euros respectively. The overall costs of the energy packages, including thus household energy, is estimated to be 48 billion euros, making it the largest in the European Union in absolute terms and the second largest in relation to national GDP (European Commission, 2023). Although considerable, these numbers are not particularly surprising, considering that Italy is a manufacturing country which depended for 38% of its gas supply from Russia (Statista, 2024e).

With respect instead to the Temporary Crisis Framework, Italy was the second-largest user of these measures, with 10.57 billion euros deployed under the framework (European Commission, 2024). However, looking strictly at the aid element, the picture is considerably moderated. In fact, Italy channelled a large share of its aid through repayable instruments, thus lowering the strictly aid-related component to 3.83 billion euros. Moreover, looking at the proportion of the temporary crisis framework state aid in relation to the total state aid changes the picture remarkably. In fact, less than 15% of the state aid granted in Italy was granted under the temporary crisis framework, in contrast with 32.5% of Germany and more than 40% by Spain.

The several emergency decrees of this period also present interesting industrial political features. To begin with, the instruments to intervene in the steelmaking sector were furthered, presumably in order to support the ILVA which, in an already precarious situation before the crisis, risked a complete shutdown. The second emergency Decree (*Aiuti Bis*), under the Article 30 “*Urgent measures in support of steelmaking*” empowered Invitalia to underwrite further capital increases, or similar instruments, until 1 billion euros for the year 2022. The third emergency decree (*Aiuti Ter*) expanded the tasks of Invitalia in steelmaking by tasking it of managing 1 billion euros for the project of introduction of hydrogen-based steel.

⁶⁹ Legal reference: Art. 6, comma 1, 2, 3, 4; Decreto-Legge n. 115/2022. *Misure urgenti in materia di energia, emergenza idrica, politiche sociali e industriali*. (22G00128), Published in the Gazzetta Ufficiale n. 185, 09.08.2022.

⁷⁰ Legal reference: Decreto-Legge 144/2022. *Ulteriori misure urgenti in materia di politica energetica nazionale, produttività delle imprese, politiche sociali e per la realizzazione del Piano nazionale di ripresa e resilienza (PNRR)*.

Moreover, the *Aiuti Bis* introduced the “areas of strategic national interest” (*Aree di interesse strategico nazionale*), namely areas dedicated to public or private investments that would cumulatively amount to at least 400 million euros. By sectors of strategic relevance the law identifies microelectronics, semiconductors, battery technology, high-performance computing, cybersecurity, Internet of Things, low-emission manufacturing, automated and connected vehicles, digital healthcare and hydrogen, as identified by the European Commission as strategic value chains. Furthermore, the *Aiuti Bis* provided 524 million euros for the financing of the *contratti di sviluppo* until 2030 and further increased the IPCEI Fund by 606 million euros until 2030, to be added to the already available resources.

Eventually, the role of SACE as an anti-cyclical instrument was furthered, with 100 billion endowment for guarantees covering until 90% of the loan amount, a new fund of insurance against natural gas trade, and the cancellation the required fees for guarantees⁷¹ (MIMIT, 2023)

Therefore, there was an overall extension of the support schemes and a refinancing of the state aid instruments of industrial policy. However, such measures should be read overwhelmingly as part of a broader anti-cyclical effort and they factually represent a crisis response rather than a newly found interest for industrial policy. The first year of the Draghi government, before the energy crisis, was factually largely featured by passivity in industrial policy and an attempt to rein in the developmental approach of the previous government (Interview 50).

In September 2022, a right-wing coalition led by Giorgia Meloni won the electoral round, obtaining a very solid majority and marking the coming back of a political government. Although many commentators expected a sort of coming back of the developmentalist vein of the Italian radical right, to the present date this does not seem to have happened, and politics in this direction seems to have been overwhelmingly featured by symbolic initiatives such as the renaming of the MISE into MIMIT (*Ministero dell'Imprese e del Made in Italy*). Although little doubt is raised regarding the rising prominence of industrial policy in the overall priorities of policymaking (Interviews 62, 70), this seems to be more exogenously led by the critical economic circumstances (e.g. green transition and energy crisis) rather than by a systematic approach to industrial policy. As will be shown in the sections related to the industrial sectors, the government did undertake some industrial policy initiatives, although these acquired more the form of a sort of “PR corporatism” (Bernaciak, 2017), rather than of systematic plans.

The only considerable industrial policy plan designed by the new government is what came to be known as the *Piano Mattei*⁷² (Mattei Plan). This plan was to a large extent born out of the energy crisis following

⁷¹ Legal reference: Decreto-Legge 50/2022, Misure urgenti in materia di politiche energetiche nazionali, produttività delle imprese e attrazione degli investimenti, nonché in materia di politiche sociali e di crisi ucraina, 17.05.2022

⁷² The reference is to the former manager of ENI Enrico Mattei (1906-1962), known for his highly ambitious developmental plans for ENI, his role in the buildup of the company as a transnational player, but also for his idea advantages from resource extraction should spillover in the local economies where such resources are placed.

the Russian invasion of Ukraine, after which Italy engaged in a policy of substitution of the gas previously imported from Russia. This has increased reliance on Africa, and especially on Algeria, for importing gas. The Mattei plan is thus aimed at expanding the Italian economic presence in Africa while, at the same time, providing support to local economic and social development in exchange, by intervening in six fields: education, healthcare, water, agriculture, energy and infrastructure (Presidenza del Consiglio dei Ministri, 2024).

The Piano Mattei makes available 5.5 billion euros for a series of pilot projects, which are interesting both for the content and for the actors playing a role in them. Two observations are particularly relevant.

First, it emerges that several projects are paralleled by activities of energy resources extraction in the target country or contemplate the buildup of a related infrastructure. Examples of projects in this field include gas extraction facilities, the buildup of an interconnector and the perspective building of a pipeline between Italy and Tunisia in the context of the European project H2 South.

Second, the role of state-owned enterprises is considerable in most of the pilot projects envisioned. ENI will be active in the Ivory Coast for the extraction of gas and crude oil, in the Republic of Congo for importing gas, and in a project related to biofuels in Kenya. Terna is tasked with a very large project (ELMED) of a 220 kms submarine cable aimed at creating an interconnector between the Italian and the Tunisian electricity grids in order to create an access point to electricity generated in Africa.

CDP, SACE and SIMEST are tasked with the financial aspects of the project, including support of investment of Italian companies in Africa, guarantees for investments, and providing finance also to local SMEs. The role of CDP here is rather extensive both as an administrator of public resources (*Fondo Italiano per il Clima*) and as an anchor investor in important funding initiatives such as the “*Growth and resilience platform for Africa*”.

We also find a company that was previously 20% owned by CDP, namely Bonifiche Ferraresi, the largest Italian agricultural company, tasked with a project on “desertic agriculture” in Algeria, financed with the support of SIMEST, and a project in support of Egyptian agriculture.

The role of state-owned enterprises in the project is even more evident when looking at the steering committee of the Piano Mattei⁷³. To begin with, ICE, CDP, SACE and SIMEST each have a fixed place in the board of the steering committee, while the remaining members have to be included from civil society and the business world. Among this latter group of members, the only businesses represented are the state-owned enterprises ENEL, Ferrovie dello Stato, Leonardo Terna, Fincantieri, SNAM and

⁷³ DCPM 06/03/2024.

ACEA⁷⁴. Further documentary and interview sources confirm that state agencies like SACE, CDP and SIMEST are being widely mobilized for the Mattei Plan (Interviews 48, 46; SIMEST, 2024)

In the business world, the Piano Mattei has been so far relatively little discussed, although finding the support of Confindustria (ANSA, 2024b). It is also interesting to note that the Confindustria representative in the steering board of the Mattei Plan is also the secretary of Federacciai Antonio Gozzi, who recently endorsed the idea of the interconnector with Tunisia as a way to accelerate the possibility to import green electricity from Africa, in order to be able to produce completely green steel in Italy.

Particular support to the initiative was also given by ANCE, the business association of the construction industry, and also part of the *Cabina di Regia*. In particular, the construction industry saw this as an occasion to further engage in a process of internationalization in the field of public works and infrastructure (Senato della Repubblica, 2024). In fact, in the foreign portfolio of the domestic construction industry, Africa already occupied an established share of 12% (ANCE, 2024b). Among the remarks made by the association regarding the implementation of the Plan, it is noticeable the request for a timely mobilization of the state finance given in support of the project, through the fund managed by CDP.

Beyond the Mattei Plan, the initiative in terms of industrial plans by the government was rather weak. Other “general” measures that were undertaken as temporary aid for the energy crisis (*Aiuti Quater* and *Aiuti Quinques*) were the lengthening of the tax credit for energy expenditure and the temporary halving of the VAT tax on household and industrial use of gas. The sectoral activity of the government will instead be dealt with in the subsequent chapters on individual sectors.

Before starting the discussion regarding how government intervention developed in individual sectors, I will thus provide an overview of the changes regarding the management of the Cassa Depositi e Prestiti in the period right after the Conte governments. As previously mentioned, this deserves a section on its own because the institution has developed linearly during the last two governments and it has followed some logics of its own.

8.2.1) The paradox of CDP: more sectoral, less developmentalist

If the Conte government implemented the developmentalist policy agenda mostly through CDP, the reversal of this orientation by the Draghi government also took place overwhelmingly through CDP. In May 2021, the government replaced the CDP CEO Fabrizio Palermo in order to bring CDP back to its

⁷⁴ ACEA (*Azienda Comunale Energia e Ambiente*) is a company, owned by the municipality of Rome, active in the field of water utilities, waste disposal and electricity.

more traditional residual role as a fixer of market failures, relinquishing its role as an active developmental player holding strategic assets in the medium-to-long term (Interview 50).

To begin with, the subsidiary CDP Industria merged into CDP Equity. Although this may look just as a organizational re-arrangement, it is a fundamental sign regarding the strategic reorientation of CDP, since CDP Industria was established by the Palermo administration in order to hold long-term strategic shares in a developmental logic. Moreover, the shares held in INALCA (28%) and in Bonifiche Ferraresi (20%) were both sold to private investors. The ownership in some asset management funds were also reduced. For instance, the 39% shareholding in the Fondo Strategico Italiano SGR was sold, thus eventually fully privatizing the fund and leaving it to private financial market players. The 13% of FII SGR also was sold, with CDP left with 55% of shareholding. Eventually, the QuattroR SGR fund was privatized. This latter is particularly interesting, since the QuattroR was constituted in order to create a financial player who would acquire equity in companies of strategic interests undergoing temporary difficulties, thereby expanding CDP mandate.

Although the Holding Autostrade for the highways was eventually established, this was overwhelmingly a project that was already started by the Palermo administration, and the position of the government in this respect was unclear and especially ironic, considering that Draghi had a role of primary relevance in the privatization processes of the 1990s leading to the privatization of the highways.

However, CDP also undertook three new large equity investments. Two of them, Polo Strategico Nazionale and Maticmind, are motivated by the CDP strategy regarding the strengthening of connectivity services. The other one, GPI, is an operator in the field of digital healthcare services and the shareholding is again motivated with the development of strategic infrastructure.

Rather than relinquishing the instrument of shareholding per se, the Scannapieco administration seems thus to be more targeted towards a short-term use of shareholdings and a due selling of those that are not considered to be strictly strategic, in order also to avoid taking up the role of the “dividend-stripping investor” (Interview 46).

Although the size of the balance sheet expanded, the resources employed by the group shrunk. In 2021, the CDP group employed 23.8 billion euros in its lending activity, against 34.6 billion euros of 2019. After a short rise to 30.6 billion euros in the year of the energy crisis, a further decline to 20.1 billion euros featured the last year of reporting (2023).

The Scannapieco administration shows however an apparent paradox. Despite its markedly less developmentalist orientation, the activity of the bank has become more targeted than in the past, trying to overcome the typical “generalist” approach of CDP as a lender (Interview 46).

In particular, the 2022-2026 strategic plan dedicated a whole chapter to the “support of strategic production chains”⁷⁵ (CDP, 2022a). For this purpose, the plan distinguishes between two sector groups. On the one hand there are the “*Made in Italy excellence sectors*” which includes agribusiness, metalworking, fashion and design, chemicals and pharmaceuticals, automotive, naval engineering, tourism and culture. On the other hand, there are the “*enabling sectors for the twin transition*”, namely aerospace, renewables (including energy, batteries and hydrogen) and semiconductors.

Two observations are in order. First, the sectoral targeting includes 10 sectors in total, making it broad enough to question the extent to which this can be considered as real targeting. Moreover, the sectors identified display a very high degree of heterogeneity. Second, it is considerable to notice that of these ten sectors, at least four (chemicals, naval engineering, aerospace, renewables) are featured by a strong presence of the state-owned enterprises. Sources provide confirmation that state-owned enterprises have provided a considerable input to the definition industrial policy (Interviews 46, 49, 69). It is thus credible that this dialogue has included also, and perhaps especially the CDP management, with which coordination is made easier by the fact that CDP representatives are on the board of these companies.

Therefore, a system seems to have been set in motion, whereby state-owned enterprises have been slowly developing an agenda of their own, ensuring that developmental projects maintain their consistency over time.

As a matter of fact, many projects set in motion synergies between CDP and its shareholding companies, continuing and reinforcing a previously established trend. Examples in this respect are the cooperation with SNAM on the hydrogen economy, (CDP, 2024c), financing of shipbuilding with Fincantieri (CDP, 2021c) or the project for digital transition and innovation in the naval sector where, among others, Fincantieri also participates (CDP Venture Capital, 2024)

Moreover, CDP kept playing the role of patient capitalist able to provide financial stability to its participated companies. For instance, CDP and ENI participated to a capital injection and brokered a consortium to increase the capital in SAIPEM of roughly 2 billion euros, 43% of which by CDP and ENI jointly. Furthermore, Saipem had a financing agreement of 1.5 billion euros, 645 millions of which by Eni and CDP (Borsa Italiana, 2022; Ansa, 2022). Another instance of this kind is when, in 2024, CDP participated to a 400 million euros capital raise in order for Fincantieri to buy part of Leonardo’s activities in the military business (Il Sole 24 Ore, 2024z)

⁷⁵ The term “production chains” is here used as an English translation of the Italian word “*filiera*”, which is not translatable as supply chain, since the “*filiera*” usually refers to local suppliers.

8.3) Resilience and change in the Italian chemical sector

At this point of the narrative, it is possible to make two types of assessments on the development of the Italian chemical sector. As a general trend, the share of the Italian chemical production on the total world production has been falling consistently for the whole period between 2003 and 2022, with its fastest decrease in the years between 2007 and 2011. While Italy accounted for 3.5% of world chemical revenues in 2003, the percentage had decreased to 1.2% in 2022 (-67% of the original share). The German share has fallen slightly less, by 53%. In absolute terms, revenues were 16% higher in 2019 than in 2003, but, by comparison, they were 57% higher in Germany (Federchimica, 2024). Therefore, although there is a clear structural trend related to the decline of revenues by the Western chemical producers, largely relatable to the steep increase in Chinese output, the position of Italian chemistry has been weakening consistently and stronger over time.

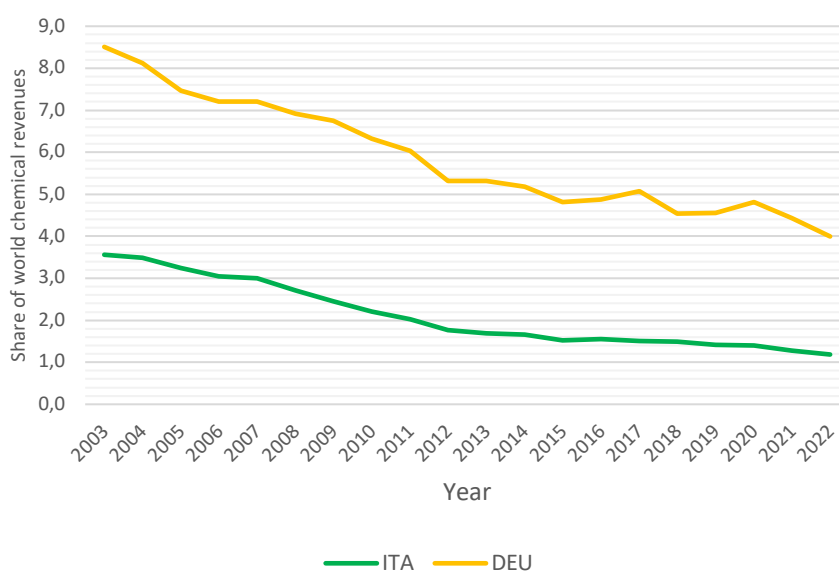


Figure 89 Share of World Chemical revenues by country (% of World revenues in the chemical sector) (own calculations based on: Federchimica, 2024)

However, by the end of the 2010s, the crisis of Italian chemistry seemed to have at least temporarily halted and the industry could end the decade in a rather optimistic mood. Paolo Lamberti, head of Federchimica, declared that *“finally we can look at the future with more optimism (...) We can say, with pride, that chemistry is among the sectors that best managed to resist and reinvent themselves, becoming even stronger in its international competitiveness”* (Il Sole 24 Ore, 2018o).

Despite this apparent rebound of the Italian chemical industry, signs of weakness of the sector were already visible in 2019, due to the crisis of the purchasing sectors, and specifically the deceleration of automotive and the stagnation of the construction sector (Federchimica, 2020).

The energy crisis of 2022 had the effect of further accelerating some unfavorable tendencies. Although the recession was heavy for Italian chemistry, its stronger focus on specialized chemistry made so that the energy crisis would impact less compared to other countries (Federchimica, 2023a).

For instance, in 2022 production prices increased by 26% in Germany, by 37.2% in France and by 22.3% in Italy, which was thus the least affected of the three chemical producers (Federchimica, 2024). Despite the increase in the production costs was more moderate, export revenues increased faster in Italy (+20%) than in Germany (+16.4%) or France (+16.1%), perhaps pointing to a higher pricing power and competitiveness of Italian production in the context of the crisis. In terms of production quantities, compared to 2019, Italian production dropped by 4.7% in 2022, compared to a drop of 8.1% in Germany and 5.9% in France (Federchimica, 2023a). Employment also saw a slight increase (+1%) as contrasted to the steep -13% decline in Germany. The crisis affected particularly vehemently the fields of organic basic chemistry and consumer chemistry (detergents and cosmetics), while specialized chemistry seems to have remained more intact (Federchimica, 2024). Eventually, the sector maintained, despite the contingency, lower bankruptcy rates and a relatively more solid capital structure, which makes it also less reliant on external financing (Federchimica, 2023a; Interviews 52, 53).

Despite the more specialized nature of Italian chemistry represented a buffer, it can also be seen that the results of basic chemistry still have an important impact on the overall sector performance. It can be seen that since 2021 especially the foreign revenues of all the other sectors increased faster than the domestic revenues, while this was not the case for basic chemistry and chemistry overall (Federchimica, 2024).

Eventually, the years after the Covid-19 crisis saw a stagnation of the historical tendency of Italian chemical companies to increase the share of exports on their total revenues, although it is still too early to understand whether this will be a structural or a conjunctural tendency.

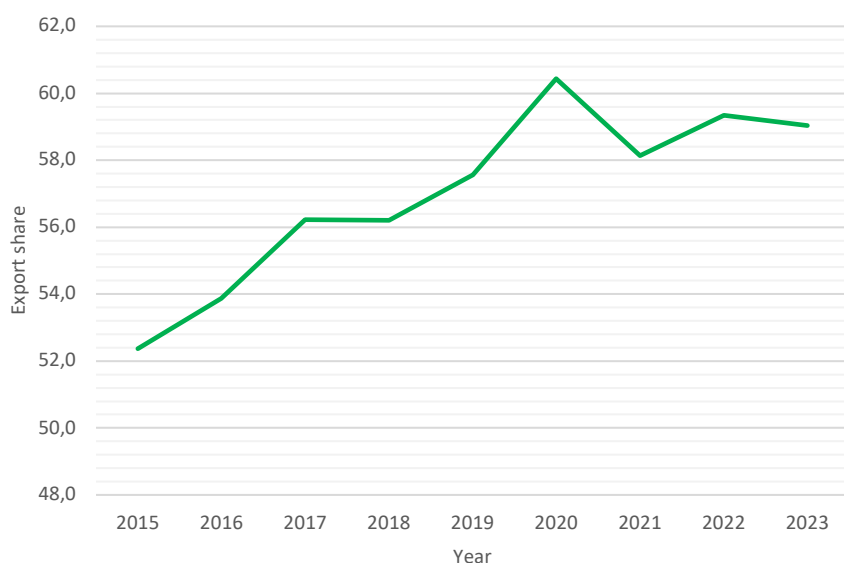


Figure 90 Export share on total revenues (own calculations based on: Federchimica, 2024)

Therefore, at the current state of art, the industry underwent an acceleration of the competitive pressure on basic chemistry but did not leave specialized chemistry untouched. For instance, even in more advanced sectors, such as bioplastics, the Chinese and American competitions are perceived as an urging threat, since there is also a problem of leakage of non-decarbonized products in Europe (Il Sole 24 Ore, 2023a).

In this overall frame, the demands of the Italian chemical industry were not particularly different from those of the German industry. The political developments suffered nevertheless from the high instability of the Italian political scenario in the period of crisis that started in 2018.

It seems safe to state that the relationships between the industry and the two Conte governments was not idyllic. Already on the 4th of June 2018, when the Conte I government was three days old, the Federchimica secretary Lamberti indirectly criticized it during his speech at the national assembly of the organization, especially for its Eurosceptic orientation (Federchimica, 2018).

One year later, another press release would stress again the concept, also hinting to “[a] general anti-scientific and anti-industrial attitude” (Federchimica, 2019b: p.2), probably referring to the government’s idea of a “plastic tax” (The Guardian, 2019). The plastic tax raised indeed concerns by Lamberti, who overtly expressed the opposition of the organization, in light of the dramatic consequences this would have on Italian chemical manufacturers and since Italy is the second player in Europe in the sector (Federchimica, 2019c). Although the tax was formally introduced, its practical implementation was postponed several times and, at the time of writing, it has still remained unapplied.

The sector nevertheless indirectly benefited from the boost in demand stemming from the construction sector during the “*Superbonus 110*”. Since input-output tables are not available for the years 2021 and 2022, the best that is pursuable is a collection of hints. Although data on revenues have to be evaluated carefully due to the price effects of the energy crisis, it can still be noticed that, in the segments directly related to the construction sector, revenues increased much faster than production prices. For instance, in the field of paintings and coatings, production prices increased by roughly 9% and 22% in 2021 and 2022 respectively, compared to 2015. However, revenues had increased by 28% and 57% respectively (Federchimica, 2024). Company reports also provide evidence that chemical companies active in business segments related to the construction sector benefited from the “superbonus”. For instance, the styrenics business segment of Versalis benefitted from the energy efficiency incentivization (Versalis, 2024). The second largest Italian chemical company, Mapei, also reported the superbonus as an important factor in fostering revenues from the segment of “residential redevelopment”, which also makes up the most important segment for investment volume (Mapei, 2023). More generally in the business segment of painting, positive impulse has come from the construction boom (Federchimica, 2023a).

In 2021, the Draghi government established a permanent “Table on Chemistry” to monitor the sector’s transition (Polimerica, 2021e).

When energy prices started rising right before the war, in January 2022, the measures proposed by the Draghi government were considered to be too modest by Federchimica (Il Sole 24 Ore, 2022l). Confindustria presented a 7.5 billion worth package for the chemical industry following a consultation of the round table on chemistry, to increase the production of natural gas and increase the service of “*interrompibilità tecnica*” and tax credit for the energy intensive sectors (Federchimica, 2023a).

Industry complained of a scarce reception of its proposals by the government, except of the abolition of the “system costs” (*oneri di sistema*) on gas and electricity and the tax credit of 20% on commodity energy sources (Federchimica, 2023a).

With the beginning of the war, the subsequent extension of the coverage and amount (45%) of the tax credit was welcomed as a measure ensuring the overcoming of the increase in energy prices (Federchimica, 2023a). Initiatives were also started in order to find new forms of gas supply, by using the state-owned SNAM.

However, specific measures for the chemical sector were not envisioned, although it was pointed out that it would have been useful to have the tax credit also on methane for non-energetic consumption (Federchimica, 2023a).

With the subsequent continuation of the chemical crisis, some attempts at coordination with the industry took place, although more on an ad-hoc basis. For instance, the government mobilized against the new

European directive on packaging since it would impact the whole Italian supply chain of packagers and endanger investments done by plastic companies in this sector (Il Sole 24 Ore, 2023c)

The new Meloni government opened another “Table for chemistry” and, although the industry publicly endorsed them, they seem to have resulted in very few real commitments (Federchimica, 2023b).

Meanwhile, requests for state support for bridging the industrial, and especially the green, transition started becoming more vocal. Federchimica posed more direct demands for capex and opex subsidization for the green transition, more or less on the line of other chemical organizations in Europe (Federchimica, 2023a). Moreover, trade unions and Federchimica jointly requested a “fund for sustainable chemistry”, and the MIMIT announced higher financial commitment for the sector to come (Polimerica, 2024e).

It is thus early to portrait how the political commitment to the sector will develop over time. However, the typical patchwork and unsystematic approach that featured the Italian style of industrial policy was also visible in this field. There is once exception in this respect, and this is CDP, which included the chemical sectors in its 2022 plan for targeting of “strategic supply chains” for the Italian economy (CDP, 2022a).

It should also be pointed out that the sector has recognized the usefulness of innovation-oriented industrial policy undertook by previous governments, which aided R&D financing, as well as upgrading investment (Interview 54).

It is however recognized that the heterogeneity of the sector and the average small or very small size of the players significantly contributes to coordination problems in industrial policy coordination (Interviews 54, 50). Therefore, size represents a political limit.

The process of shrinkage of basic chemistry, which in Italy is continuing to unfold, carries strategic implications that will be of interest in future perspective.

The new president of Federchimica Buzzella pointed out: “(...) *if basic chemistry was to disappear in Europe, we would become dependent on other countries, with critical consequences for the entire manufacturing sector, which is intertwined with chemistry: fundamentally, without chemistry there is no manufacturing*” (Il Sole 24 Ore, 2024t).

In this respect, it is of particular relevance to this narrative is the case of Versalis, as the largest Italian chemical company in terms of revenues and one of the most affected by the transition away from basic chemistry. Due to its exposition to these sectors, and especially due to the crisis in automotive, Versalis was predictably one of the first players to suffer from the bad conjuncture, and the operating results started falling again, worsening even further after the war crisis (Polimerica, 2019a) (Figure 91).

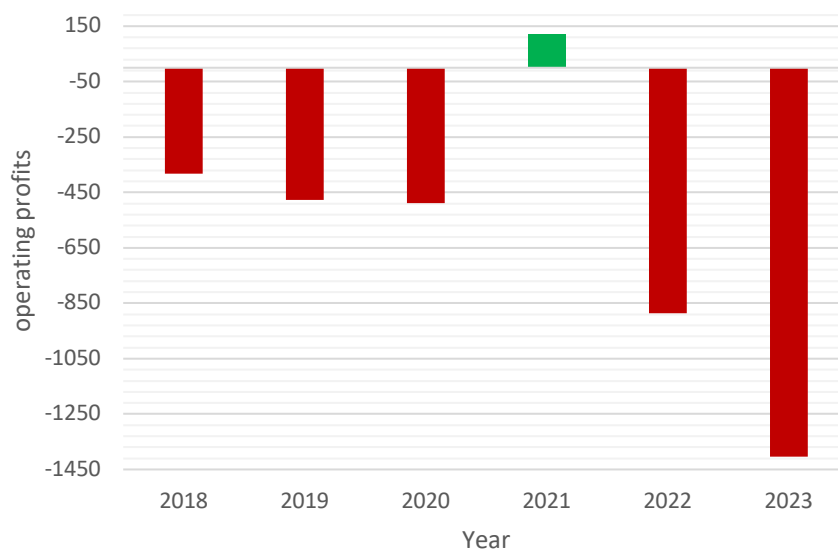


Figure 91 Operating profits of Versalis (mln, EUR) (Versalis Annual Reports, 2019-2024)

A large part of the problems encountered by the company has to do with the persistent large share of its business exposed to basic chemistry. In fact, Versalis had undergone very strong pressures on margins precisely in those segments related to basic chemistry that were more fragile to price competition. In particular, results were influenced by lower sale prices for polymers, and by increased price competitiveness by producers with higher economies of scale and lower raw material costs (e.g. shale-gas), such as the US (Polimerica, 2020d; Versalis, 2020).

The parent company ENI thus started to pursue a business strategy, for the chemical segment, based on finding external partners for promoting the company development and especially the movement towards higher value-added products and the bioplastics and chemical recycling businesses, with the planned opening for the latter of a new plant in Mantua (Il Sole 24 Ore, 2019a; Polimerica, 2020a; 2020b). This reconversion plan, which was already an ongoing project of the company, was consistent with the technological endowment of Versalis, which licensed technology in bioplastics and styrenic resins and chemical recycling also for external use (Polimerica, 2020c; 2021a; 2021c). Furthermore, the reconversion to the bioplastics business is further enabled by the integration with the parent company Eni, which can provide biobased naphtha from its refineries converted into biorefineries (Polimerica, 2021h).

The idea of finding external partners entailed external acquisitions, technological partnerships and even the sale of company shares to obtain external capital. In terms of external acquisitions, Versalis acquired, in 2021, Finproject, an important specialized chemistry company allowing Versalis to get closer to final customers in the production chain (Versalis, 2022; Camera dei Deputati, 2021; Polimerica, 2021b). The Ecoplastic company plant technology was also acquired in order to upgrade the plant in Porto Marghera

(Polimerica, 2021f). Among the external partnerships, of specific interest is the partnership with SAIPEM for the production of bioethanol (Versalis & SAIPEM, 2021).

Part of the restructuring process was the closure announced for 2022, of the cracking plant⁷⁶ in Porto Marghera (Polimerica, 2021g). Due to the occupational consequences this would entail, and the lack of a specific plan on the perspectives of the staff in excess, unions strongly opposed the closure of the plan.

Interestingly, unions appealed to the strategic role of Versalis in Italian chemistry as a grounding for the opposition to the closure. In a public statement, they would argue that:

“The recent choice of ENI of closing the activities of the cracking plant in Porto Marghera risks to compromise the production lines of basic chemistry, which currently are almost exclusively of ENI” (Polimerica, 2021i).

The government was newly involved and ENI was called to report in front of the parliament regarding its future plans for the plant and stated that the closure of the cracking was confirmed, maintaining the occupational levels, in the context of a restructuring plan aimed at decarbonizing production and at creating a vertically integrated chain whereby the commodities would not be sold on the final market, but used for more value added products (Camera dei Deputati, 2021). In particular, the company argued that the scale reached by production in the Middle East and in the Far East made production in Porto Marghera highly uncompetitive. Furthermore, production costs were a problem, with ethylene production being 50% to 60% more expensive than in the United States and three times more expensive than in China.

The plans of the company for the Porto Marghera plant would nevertheless remain highly disputed, and the company would be called at later points again to report to the MISE, for instance when, in 2022, the presidents of the regions of interest for ENI plans called for a governmental table on the issue, since the intentions of the company were unclear (Polimerica, 2022a).

The pandemic crisis had the paradoxical effect of relaxing price pressure on the company which, due to the supply chain disruptions, found less competition by extra-EU players (Versalis, 2021). Furthermore, Versalis successfully attempted to diversify its business lines by entering the segment of disinfectants, where it had no presence before and where it would continue to maintain presence later (Il Sole 24 Ore, 2021a; Polimerica, 2022b).

However, as visible in Figure 91, the energy crisis pushed the already precarious balance sheet of Versalis even further into the red area. Being a basic chemistry player, Versalis is highly energy intensive and the proportion between the costs of utilities and total revenues increased from 14% in 2020 to 23% in 2022. In absolute terms, the costs related to services and utilities increased by 33% in the year 2022

⁷⁶ Cracking is the process whereby large hydrocarbon molecules are broken down into smaller hydrocarbon molecules which then can be used for a variety of products (e.g., propylene, ethylene)

(Versalis, 2021; 2023a). Moreover, the deepening of the automotive crisis affected the elastomers business, contributing to lower operating results (Versalis, 2023a). Third, the overcapacity in Middle East and China, which was an already existing problem, exacerbated during these years, especially after the deceleration of the Chinese economy, further exerting pressure on prices, especially on intermediates and polymers (Versalis, 2024). Beyond energy, competition from countries with cheaper raw materials also eroded the margins (Versalis, 2024). Therefore, less demand by the end consumer sectors and pressure on prices due to the increase in factor costs worsened the overall position of the company.

This nevertheless, Versalis continued the policy of reconversion and expansion in the field of green chemicals by acquiring 100% of Novamont, main Italian producer of compostable bioplastics and one of the largest world players in the sector (Versalis, 2023b; Polimerica, 2023; *Il Sole 24 Ore*, 2023b). Furthermore, the acquisition of Tecnofilm allowed the company to grow in the field of compound (Polimerica, 2024f). Meanwhile, partnerships were arranged in the field of tyre business recycling (*Il Sole 24 Ore*, 2024a)

The crisis accelerated nonetheless the need for Versalis to restructure its business activity. A new restructuring plan was thus announced, including a further reduction in the crackers and generally in the presence in basic chemistry (*Il Sole 24 Ore*, 2024b; 2024c). For the Italian plants, the idea is to convert the manpower rather than recurring to layoffs. The CEO explained that, while previously the capex was devoted 50% to basic chemistry and commodities, this will drop to 10% and the remaining will be for new platforms (Polimerica, 2024a). Moreover, in this phase, ENI plans to transform the corporate model towards that of the “satellite company”, which is probably more decentralized but also presumably more based on the entrance of external investors (ENI, 2024b). In this frame is presumably included a plan of finding an investor who would buy a 30% stake in Novamont (*Il Sole 24 Ore*, 2024e).

Trade unions appealed to the government as main shareholder of Versalis to take action in protection of employment and to request clarifications on the business plan (Polimerica, 2024d).

The MIMIT thus called for a round table on chemistry, especially in order to evaluate the Versalis strategy and the company granted the maintenance of occupation levels without the use of the cassa integrazione (Polimerica, 2024b; 2024c). At the present state-of-art, it appears that Versalis will continue its restructuring process without recurring to extensive layoffs of the kind undertaken by other European basic chemistry players.

For the purpose of the argument and of the processes analysed in this book, the Versalis case is of particular interest in several respects.

To begin with, the dynamics of the relationship between state ownership and the business strategy are worth to be discussed. It emerges how the coordination between the governments and ENI on this is far from being optimal, and the presence of informational asymmetries is evident by the several “tables”

and auditions that had to be opened to deal with the Versalis case, where from several sides the company was accused to have a rather unclear business plan (Camera dei Deputati, 2021).

However, the fact that the company is a subsidiary of a state-owned enterprise has undoubtedly influenced and shaped its nature and the way of implementation of its business strategy. There is a clear set of expectations related to the fact that Versalis should be accountable to the public shareholder and that it is not simply a corporation like any other.

This emerges even more clearly in the numbers. Still in 2022, Versalis was the largest chemical company in terms of revenues and employed 80% of its employees in Italy, against an average of 42% among the first 10 largest and an average of 60% among the 50 largest (Federchimica, 2023a). Considering all the locational disadvantages, and the very strong pressure on costs for the business segments of Versalis, it would be difficult not to attribute the maintenance of the occupational levels at least to a certain degree of public influence.

Second, the idea that the company should be preserved as a public asset seems also to have loomed large over this sort of political influence. Motivations that are given are of varied nature. One is strategic. Since a very large share of the Italian basic chemistry is connected with Versalis, the survival of the company is of strategic importance to avoid that certain scarcely profitable but structurally important goods do not have to be imported. This motive has nevertheless lost at least some traction, since the impact on the final results has worsened over time, requiring an ordered withdraw. In this respect, the overwhelmingly negative operating profits of the company would have been unthinkable in a context where the company would have been left simply to the vagaries of the market, as also stated in the early 2010s by the management of the company itself during a parliamentary audition. In this respect, it is remarkable how the public shareholder nature of ENI seems to have given it a role as provider of patient capital for the transformation. As previously mentioned, Versalis inherited in the 1990s the branches of the chemical industry that were already less profitable to begin with. The transformation towards business segments at higher value added requires important investments and a lengthening of the timespan, waiting for returns at a later point. As can be seen from Figure 92, the percentual importance of revenues from non-basic chemistry segments of activity started rising only relatively recently. Therefore, state finance in the form of cross-subsidization within a state-owned corporation seems here to have had important industrial effects on the chemical sector, guaranteeing the preservation of certain segments and the ordered reconversion of others.

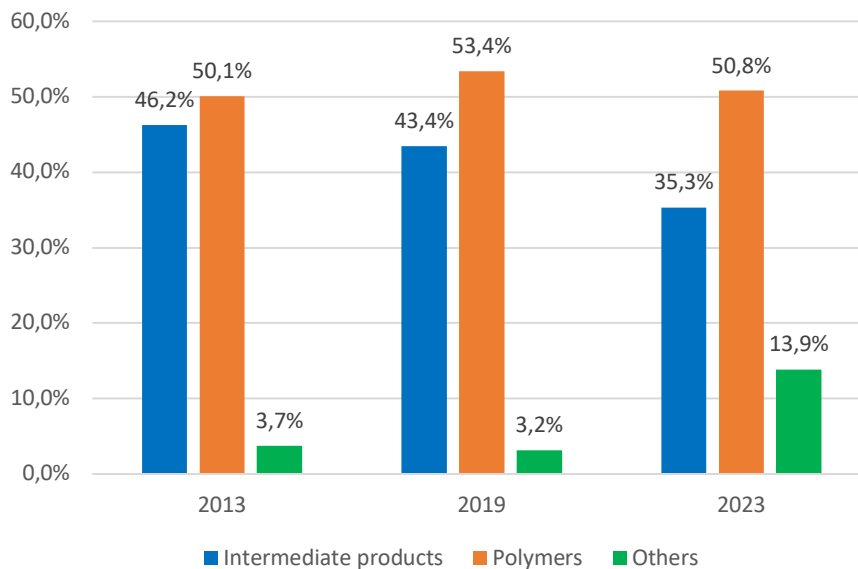


Figure 92 Share of Versalis revenues by product segment (own calculations based on: Versalis, 2014; 2020; 2024)

Whether this is a form of industrial policy is a highly subjective evaluation. The main concern of the policymakers seemed to have been the maintenance of occupational levels and the environmental impact, rather than the real developmental aspects. The latter seemed to have been mostly a concern of the parent company ENI which planned its relaunch. Perhaps more accurately, the situation seems to be such that the political pressure exerted a “beneficial constraint” that pushed ENI to play an industrial policy role partially against its will, in order to find a win-to-win solution.

This seems thus to be a case of state-owned enterprises making industrial policy without the existence of a proper industrial policy, as some interview sources also argue to have been the case (Interview 69).

On this point, a brief mention of the hydrogen strategy may be particularly relevant. The Ministry of the Economy published the first guidelines for a hydrogen plan in 2020, during the second Conte Government. This plan, vaguely resembling the German hydrogen strategy, also had the double aim to craft a domestic hydrogen industry, as well as increasing hydrogen in the energy mix. A final “National Hydrogen Strategy” would have nevertheless to wait until November 2024 to be published.

It should nevertheless be pointed out that state-owned enterprises have been playing a remarkable role in the hydrogen conversion, independently of the political level, through their investment strategies. It is somehow difficult, in this respect, not to see some synergies.

ENI started to plan investment in the hydrogen business in 2018 as part of the broader attempt to reconvert towards the green economy (ENI, 2019). The company reportedly was devising a plan to create a cluster for hydrogen-powered mobility and a waste fuel plant with proprietary technology, and targeted specifically blue hydrogen for growth (Camera dei Deputati, 2021; Il Sole 24 Ore, 2019b;

2020b). Meanwhile SNAM was also deployed in the construction of the hydrogen infrastructure and ENEL developed this business line (IEA, 2024; Il Sole 24 Ore, 2020c).

Financial support from the government was only concretely envisioned in 2023, and so far only announced, but not yet implemented. Among the announced measures, 2 billion for hydrogen in steel and heat production, 100 million for electrolysis, Contracts for difference, 950 million for industrial hydrogen and 200 million for replacing diesel trains with hydrogen ones (IEA, 2024).

The role of SOEs in this specific case seems thus to have been to provide time consistency to a developmental project independently of the orientation of the government and engaging in some forms of coordination through partnerships. The evidence presented here is mostly made up of second-guessing and hints, since I did not carry out interviews regarding the hydrogen strategy and the role of SOEs in it, while documentary evidence is inconclusive. Nevertheless, further research can point in this direction.

8.4) Forced to step in: the Italian steelmaking sector and the return of the “*acciaio di Stato*”

In the late 2010s the situation of Italian steel seemed to have stabilized. The sector experienced a short wave of mergers and acquisitions and big players, like AST Terni were turning back to profit (Il Sole 24 Ore, 2017j; 2018f; 2021f). The price pressure was temporarily eased by tariffs imposed on some extra-EU imports.

The production volume had reached its low in 2015 and, by 2018, the sector was at its post-crisis peak of 24.500 t of steel produced. However, this should rather be framed as stagnation rather than rebound, considering that, in the pre-crisis period, production levels were consistently higher than 25.000 (Federacciai, 2016). As shown in the previous chapter, the production volumes had dropped already starting in 2011, mostly due to the declining blast furnaces business, including the crisis of ILVA, which is the largest national producer. In 2023, Italian steel production was composed for 86% by electric furnace production, while the blast furnace process constituted only 14% of the total production (Federacciai, 2024a). This brought Italian steelmaking in a very different position vis-à-vis the green transition as compared, for instance to Germany, where blast furnaces products make up a very large share of production. It will however be clarified later how this comparatively “greener” outlook of Italian steel is a strategic liability when considering the strong dependence of the country on imports for some specific steel productions, mostly those connected with industrial use.

Eventually, considering the types of products, the late 2010s have been featured by a bifurcation between the production tendency of flat rolled products and steel products. This was due mainly to a fall in the production of flat products while long products maintained sustained production levels (Federacciai, 2024a). The reason for which the product type is relevant has mainly to do with the buying sectors. Long

products tend to be used comparatively more (but not exclusively) in construction, while flat rolled products have a more heterogeneous purchaser composition. Looking at the more specific products' composition, it can be seen that products more strictly related with construction such as rod wire, reinforcement bars, steel beams, reinforcing materials make up alone 39.1% of the steel production, followed by the hot rolled coils (32.1%) of more generic use. We would thus expect Italian steel production to be more sensitive to the developments of the construction sector.

The 2022 energy crisis aggravated the general crisis of the sector by means of the competitive disadvantage due to high electricity and gas costs. As previously mentioned, the trade deficit reached its high in 2022 in coincidence with the energy crisis and the introduction of the “Superbonus” for the construction sector. The Italian deficit has however specific geographical features that make guess that price competitiveness may have been the primary factor. In fact, the trade balance of Italian steelmaking is largely positive in intra-EU trade but more heavily negative vis-à-vis extra-EU countries. What is remarkable is also that the trade deficit is exclusively driven by the flat products, which were a strong focus of the former ILVA, and the trade deficit is strongly related to the decline of the production capacity of the manufacturer.

Analogously to the case of the chemical sector, it is hard to estimate the effect of the “Superbonus 110” on the steelmaking sector without recurring to input output tables which, for the years of interest, are still missing. Lacking better alternatives, it may be instructive to compare the increase in the production and imports for specific steel products, by elaborating on data provided by Federacciai (2022; 2024a). The first aspect that strikes as noticeable is that not all the steel production connected with the construction sector saw a rise in the produced volumes. Reinforcing bars production even declined by 2% and 15% in 2021 and 2022 respectively. The only sectors that saw an important rise are rod wide and merchant bars (both +16% and +3%). However, in these sectors, imports raised much faster than production. Rod wire imports raised by 25% and 10% in 2021 and 2022, while for merchant bars the increase was of 12% and 22% respectively.

It is worth remarking however that looking at the volumes produced entails four limitations. First, domestic production decelerated in 2022 overwhelmingly due to the peak in domestic energy prices. Second, it is possible that part of the demand was satisfied by selling out part of the existing stock of unsold products, especially after the pandemic year (Confindustria, 2024). Third, we do not have a counterfactual telling whether the production would have fallen even more in absence of the Superbonus, especially considering the net effect of the energy crisis. Fourth, basing on these categories, it is still difficult to distinguish between whether the rising production was due to the construction sector per se or if it was an effect of the post-pandemic rebound.

What is however clear is that imports were stimulated much more than domestic production, leading to doubts regarding the final effectiveness of the policy with respect to its original purpose to stimulate demand also in the supplier sectors. Furthermore, it has to be noticed that the overall trade balance saw

a record deficit right in the years of the superbonus, which declined only in 2023 with slowing demand for imports (Federacciai, 2024a).

In terms of policy advocacy of the period, concerns raised by the industry go towards several directions: overcapacity in the world market and specifically from China, the transition to green steel production, the rising prices of scrap metals, high energy prices, and the future of the ILVA plant (Federacciai, 2024b).

With respect to overcapacity, the problem is not fundamentally different from what already seen in the German case and particular concerns are raised regarding the deceleration of the Chinese economy with consequent channelling of overcapacity in the export market. With a share of 9.9%, China is currently the second biggest exporter on the Italian market, second only to Germany (11.3%). Price competition from extra-EU countries is nevertheless a broader problem for Italian steelmakers including imports from India, Vietnam, South Korea, Russia and Japan. These countries, together with China, make up altogether around 40% of Italian steel imports (Federacciai, 2024b).

Despite the rather confrontative stance that Federacciai has taken towards the Green Deal, the green transition has been, over the last years, framed as an opportunity to use the vantage starting point of Italy, namely the high degree of electrification, to make the country a hub for green steel (Federacciai, 2024a).

“The main opportunity for Italian steelmaking in this context is that we are more ahead than anybody else in relation to the production of decarbonized and green steel, and this opens very interesting perspectives (...) this allows us to set for ourselves an even more ambitious target: to be in 2023, or even earlier, the first steelmaking location in the World reaching a fully green production of steel” (Antonio Gozzi in: Federacciai, 2024b: p. 5).

For this purpose, it is interesting to notice that Eni, Cassa Depositi e Presitti, SACE and SIMEST are called to participate in a project, initiated by the industry, for the production of directly reduced iron (DRI). In fact, the industry recently created a consortium, the CEIP (*Consorzio Elettrosiderurgici Italiani per il Preridotto*), aimed at exploring the possibilities to produce DRI. This consortium is already engaging public-private partnerships with DRI d’Italia: a company controlled by Invitalia and with the same goals as CEIP.

Interestingly enough, this enthusiastic espousing of green steel does not go hand in hand with an acceptance of the European policy of acceleration. Rather on the opposite, the CBAM and ETS reforms are considered to be conducive to the near extinction of blast furnace steelmaking in Europe, which is of strategic value.

The project on DRI is also moved by another industry concern, namely the problem of scrap steel, which is the main raw material for Italian electric furnaces-based steelmaking. In this respect, Italy represents

a European anomaly, in that it is one of the few countries to be a net importer of scrap steel, rather than an exporter. In this respect, Italian steelmakers have requested that measures would be enacted so that European scrap steel would not be exported outside of the EU, due to a discrepancy in regulatory standards for scrap steel (Federacciai, 2024b). The worry is also in perspective, considering that the electrification of steelmaking is going to result in a raise of demand, and thus prices, for steel scrap over the following years.

Together with raw materials' pricing, energy costs represent the biggest competitive burden, and it is pointed out that there is a lack of level playing field in Europe when it comes to support to energy-intensive sectors, which are increasingly dependent on the financial firepower made available by the individual member states, and especially by France and Germany (Federacciai, 2024b).

Eventually, the last critical point is considered to be the crisis of the former ILVA. This makes perhaps the most interesting of the issues raised by the industry. To begin with, it is a case where the industry advocates for the rescuing of a specific "national champion". There is certainly also a cartel logic at play here. In fact, the industry equally opposed any solution, both for ILVA and for Piombino, that would include the introduction of new electric furnaces, presumably for reasons of avoiding overcapacity, as well as competition for steel scrap. What seems to be happening here is that Italian steelmakers see ILVA as a strategic complementary asset to their system, since it covers different and complementary markets. Therefore, the Industry overtly advocated for the state temporarily holding a minority ownership stake in order to guarantee the relaunch of ILVA (Federacciai, 2024b).

As a matter of fact, the industrial policy action of the several post-2018 governments concerning the sector was overwhelmingly related to the ILVA case. For this reason, a brief look at the case will be useful to understand the overall policy developments.

Short after taking office in 2018, the Conte I government started to question the agreements taken by the Renzi and Gentiloni governments. In particular, the case was made that the ArcelorMittal offer was accepted despite there was a better option available, namely the alliance Arvedi-CDP-Jindal. Moreover, the government started questioning the legal immunity agreement with ArcelorMittal related to possible environmental damages. Several observers argued that ArcelorMittal undertook the Taranto investment not to relaunch the plant, but to avoid that the plant would become a competitive threat in the European market.

Meanwhile, the uncertainty regarding the production processes, especially for the legal cases against the plant, made so that the company would not take very remunerative orders in automotive, shipbuilding and energy infrastructure, which were acquired instead by foreign players (Il Sole 24 Ore, 2018g). These disputes over the "legal shield" continued and, meanwhile, ArcelorMittal did not give signs of being willing to invest on the plant. In summer 2019, Arcelor announced that the conjuncture requires the recurrence to the cassa integrazione of 1.400 workers, leading to protests by the trade unions and the government

over noncompliance with the agreements on occupation. Negotiations with the new government had to start anew.

The MISE Minister Patuanelli very clearly declared that, for the government, *“there is no industrial plan for the country without steelmaking”* (Il Sole 24 Ore, 2019c). Similarly, the Minister of Finance Gualtieri argued that *“Italy has to remain a large manufacturing country and (...) it needs a basic industry and, thus, also of steelmaking”* (Il Sole 24 Ore, 2019k)

In November, ArcelorMittal claimed to be withdrawing from the Taranto plant due to the withdrawn “legal shield” (Il Sole 24 Ore, 2019d). Some analysts nevertheless argued that Arcelor wanted to quit in any case because the success of the industrial plan was uncertain and in the short run the ILVA would produce losses for the conglomerate (Il Sole 24 Ore, 2019g). When consulted, workers were also overwhelmingly against the maintenance of the legal shield, although the main trade unions favored it as a way to avoid an “easy way out” for the company (Il Sole 24 Ore, 2019e).

Moreover, Arcelor already announced a reduction in the capacity due to lower demand in Europe due to the difficulties of the end users (above all automotive), which led also other producers like Arvedi to cut production (Il Sole 24 Ore, 2019h). The crisis was thus a general overcapacity crisis where the ILVA plant came as a particularly inviting target for cutting.

In that phase, prime minister Conte also included nationalization as one of the options on the table and CGIL secretary Landini asked the possibility of CDP entering as a shareholder (Il Sole 24 Ore, 2019i). Conversely, Confindustria opposed to nationalization despite recognizing the strategic importance of ILVA (Il Sole 24 Ore, 2019l). What is important here is that this is the phase in which nationalization started being discussed as a real option.

In December 2019, ArcelorMittal announced that it would proceed with 4.700 layoffs, and the MISE protested by requesting an industrial plan (Il Sole 24 Ore, 2019n). The government thus put in charge Francesco Caio, president of the state-owned enterprise Saipem, to represent the government as a negotiator for the industrial plan (Il Sole 24 Ore, 2019o). Moreover, the government made available 3 billion euros of support for reinvestment in the plant (Il Sole 24 Ore, 2019p).

Meanwhile, the financial health of the company kept deteriorating. By the beginning of 2020, ILVA had piled up considerable debt, for a total of 2.2 billion euros, 1 billion of which lent by Intesa-Sanpaolo, 300 million by Unicredit, 250 million by Bpm, 300 million by the Ministry of Finance and 330 million by CDP (Il Sole 24 Ore, 2020a). State finance had thus been already widely mobilized.

It is also interesting to notice how, with time, the government would become more and more specific in its statements regarding the agreements. For instance, MEF Minister Gualtieri argued:

"The postponement of strategic investments, both in terms of enhancing hot production capacity and in the introduction of electric furnaces, significantly deviates from what was agreed upon in March." (Il Sole 24 Ore, 2020e)

Eventually, the government set with ArcelorMittal on an agreement that was fundamentally a gradual bridging of Arcelor out of Ilva. The plan tasked Invitalia to invest 400 million euros first, and later 680 million euros as capital injections. With the first investment tranche, Invitalia would acquire a 38% stake, while with the second the share should have raised to 60% (Il Sole 24 Ore, 2020f). Meanwhile, Arcelor Mittal had to give up powers of strategic direction to the new public investor. In the first half of 2021, Arcelor Mittal deconsolidated ILVA from its financial perimeter (Il Sole 24 Ore, 2022f).

The fall of the Conte government and the taking office by the Draghi government constituted a further deceleration of the procedures to allow Invitalia to take stake in ILVA, especially considering the new non-interventionist orientation of the government, which replaced the previous head of Invitalia (Il Sole 24 Ore, 2021c). The new MISE Ministry Giorgetti argued indeed that the industrial plan had to be revised and made more realistic (Il Sole 24 Ore, 2021d). However, Invitalia entered 38% of the capital through the first investment tranche and obtained voting rights equivalent to 50%. Therefore, the company was renamed *"Acciaierie d'Italia"*. Here once again former administrators of state-owned enterprises came into play. In fact, the president of the administration council Franco Bernabè was a previous SOE manager of Eni and Telecom (Il Sole 24 Ore, 2021e).

In January 2022, Invitalia set up DRI Italia Spa, aimed at evaluating, realize and manage production plants of direct reduced iron, setting an hydrogen path for steelmaking. As previously argued, both projects are of fundamental importance not only for the ILVA, but also for the future competitiveness of Italian steelmaking in the field of green steel. In 2022, the government overall placed 2 billion euros for ILVA (Il Sole 24 Ore, 2022g)

Overall, many observers have considered the Draghi government to be excessively passive on the ILVA case, especially in relation to the scarce conditionality given to state aid in terms of environmental plans for the plant (Il Sole 24 Ore, 2022e; 2022h).

To make a fairer assessment, the MISE minister Giorgetti was already outlining a plan for the relaunching of the industry and rebuilding the national supply chain. In particular, the intention was to avoid that the Italian industry would lose steel production of strategic character, as it happened when the production of "electrical steel", which nowadays finds application in electric engines, was halted by AST Terni once the company was sold to ThyssenKrupp (Il Sole 24 Ore, 2021b)

Moreover, Draghi himself stated that *"the government intends to take ILVA back to what it was when it was competitive, the largest steelmaking plant of Europe: we cannot afford that it does not produce at the levels of which it is capable"* (Il Sole 24 Ore, 2022j).

The entrance of the government as a majority shareholder in ILVA was nevertheless visibly delayed.

Contrasts with Arcelor Mittal started arising again with the Meloni government, at the end of 2022, when the company suspended the supply chain, apparently in order to press the government to have part of the resources from the “decreto Aiuti Bis and Ter” (2 billion) and sustain its liquidity (Il Sole 24 Ore, 2022f). In 2022, the government solicited the company to deliver a real industrial plan and started considering the option of becoming a majority shareholder and place ILVA under a national plan for steelmaking (Il Sole 24 Ore, 2022b). It is in this period that voices in favour of a temporary state ownership started rising not only by trade unions, but also by the industry (Il Sole 24 Ore, 2022k). Contrasts also concerned the investment plans for the DRI, in the context of the decarbonization plan for Taranto, for which the PNRR made available 1 billion euros (Il Sole 24 Ore, 2023k). Moreover, the company required a capital injection of 650 million at the beginning of 2023 to grant its survival due to the energy crisis and the capacity to pay the debt to the state-owned companies SNAM and ENI for utilities services (Il Sole 24 Ore, 2022a; 2023h).

In 2023, Invitalia accused Arcelor Mittal of not disclosing documents on the financial and production status of the plant and of having signed a memorandum of understanding with the government without having been given notice (Il Sole 24 Ore, 2023g). Invitalia thus committed to contribute to the 320 million needed provided that the private majority shareholder Arcelor Mittal would contribute on its side (Il Sole 24 Ore, 2023f). However, Arcelor Mittal disengaged from any commitment to invest further in the plant and thus the government started newly considering options among which a state majority shareholding, which was nevertheless opposed by part of the government itself (Il Sole 24 Ore, 2023d). Once again, the decision to enter as a majority shareholder, which originally was planned to happen in 2021, was postponed.

At the beginning of 2024, the government introduced a decree to bail out ILVA creditors, introducing a series of measures including easier access to the Fondo di Garanzia and interest rate limitations, including SACE and Mediocredito Centrale for guaranteeing on the loans (Il Sole 24 Ore, 2024i).

Later in 2024, eventually, Invitalia requested the introduction of the regime of “*amministrazione straordinaria*” for ILVA, arguing that the private investor Mittal did not manage to guarantee of the productive continuity of the plant. On its side, Mittal reconducted the grim financial situation of the plant to the non-disbursement of the promised state aid by the government agreement (Il Sole 24 Ore, 2024f; 2024g). A new and still occurring ILVA crisis thus started.

In this period, voices from the industry for the state to directly intervene started becoming even more vigorous. Confindustria head Bonomi also started advocating more clearly for a temporary state ownership of ILVA and for the relaunch of an industrial policy plan for steel, which is now allegedly absent (Il Sole 24 Ore, 2024h). The fact that, in 2019, Federmeccanica intervened against the

government when the “legal shield” was lifted also points to the systemic importance of the plant for other branches of the industry (Il Sole 24 Ore, 2019d).

For this reason, a couple of words are worth to be spent on the relationship between ILVA and the rest of the productive system. In particular, ILVA is, together with Arvedi, the only steelmaking operator in Italy specialized in flat products, that are more strictly intertwined with manufacturing (Il Sole 24 Ore, 2021b).

This systemic role of the ILVA plant and its concern to the wider Italian manufacturing is explained clearly by Bonomi:

“Primary iron coming from extra-EU countries has much longer delivery times, such as that ordered from Asia, which is delivered after 3 or 4 months, and it is more exposed to price volatility risks. This implies that operators have to pile up higher stock, which require more space and influence negatively the working capital. Steel produced in Taranto, instead, reaches the industry in 30-40 days, and its costs are more predictable (...) if Italy really aims to produce 1 million vehicles per year, the availability of steel from ILVA is a strategic factor” (Il Sole 24 Ore, 2024h).

Similarly, Paolo Sangoi, head of Assofermet⁷⁷, argued that:

"There is a massive shortage of material that cannot be attributed to a single cause, but the role of ILVA and its 4-5 million tons less on the market compared to the golden years is certainly among them(...) An operation running at full capacity would have somewhat mitigated the situation: the absence of a market leader that sets the price and never says no to customers is noticeable, unlike foreign players who have now taken a share of the market." (Siderweb, 2024).

Eventually, ILVA is also strategic for other steelmakers. In this respect, of particular relevance is the case of Piombino and the related disruptions caused by not having access to ILVA coils for its own production (Il Sole 24 Ore, 2024n). In this perspective should probably also be seen the calls by Federacciai President Gozzi for a temporary entry of the state in ILVA (Federacciai, 2024b).

Despite these calls for an industrial policy for steel and the proactive statements by the government, the run to find an investor and the opening to the option of selling the plant “in blocs” do not seem to hint to a government intentioned to have a leadership over the relaunching plan (Il Sole 24 Ore, 2024o). To avoid leaving space to ambiguities, MIMIT Minister Urso stated that “[t]he experience of the State in Acciaierie d’Italia was a disaster” (Il Sole 24 Ore, 2024p).

In more general terms, outside of the usual bouncing back of responsibility to the Conte government, MIMIT Minister Urso declared the intention of the current government to relaunch Italian steelmaking and relaunch ILVA as a pole for green steel, and to develop a “national plan for steel” which would

⁷⁷ Assofermet is a business association representing steel merchants and pre-processors.

include four poles: Taranto, Terni, Piombino and the Northern hub of steelmaking (Il Sole 24 Ore, 2024i; 2024k). At the time of writing, however, the plan was still not drafted and, considering that projects for such plan already date back to the Giorgetti administration, it is highly unclear if this will ever see the daylight.

The story of Italian steelmaking is interesting at several levels for this narrative. When it comes to the perceived importance of the sector, there seems to have been no doubts over time, no particular political cleavages and there are few doubts steel is targeted as a strategic sector. However, the disagreement on the means of promotion have been so sharp that there has been high inconsistency over time in the management of the case, as the story of the last years has shown.

In this respect, the critical aspect is the rescuing of the large national player, but this did not apparently aid to the drafting of a broader sectoral industrial policy plan. The idea of having a broader plan for steelmaking was developed in the process of relaunching the company but never enacted concretely.

What also features the case of steelmaking from other sectors is that here the call for the intervention of state protection instruments seems to have been much stronger, and calls for the intervention of state financial instruments like CDP have been widely normalized.

Therefore, in this case, the lack of a broader strategic vision in industrial policy does not seem to have been an effect of scarce awareness regarding the strategic importance of the sector, but rather a by-effect of political inconsistency and scarce consensus over the methods.

8.5) Supplying, but whom? The accelerated decline of Italian automotive

By the end of the 2010s, Italian automotive was heading towards a further acceleration of its structural crisis. As explained in the previous chapter, the 2009 crisis and the Marchionne administration were the turning points that accelerated the transformation of Italy from a country manufacturer of vehicles to a country manufacturer of intermediate parts, with a gradual decoupling of the national system of suppliers from the main historical producer FIAT and then FCA.

Figure 93 displays that this was an already established historical tendency dating back to 2001. While between 1980 and 2000 Italy produced on average 1.5 million passenger cars per year, in 2001 a steep decline started ensuing and, between 2010 and 2022, the output was much more erratic, with an average of 534.366 vehicles per year (ANFIA, 2024a).

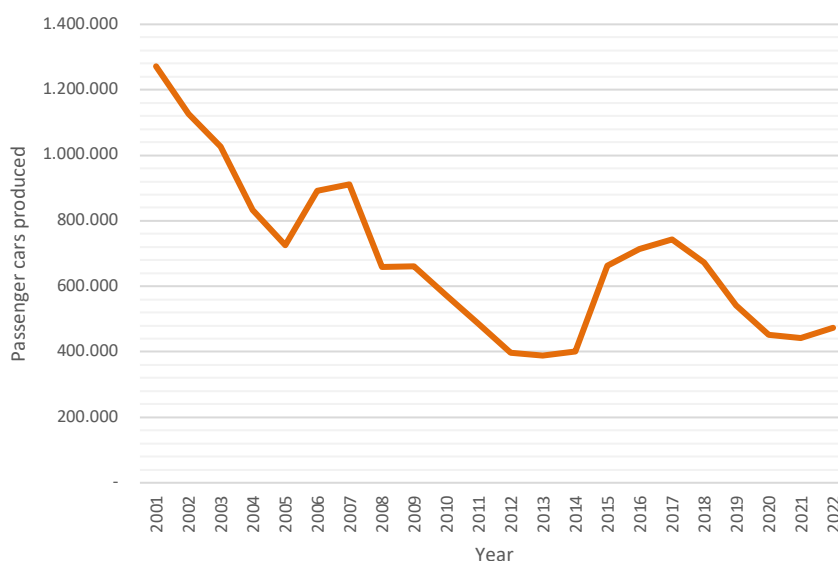


Figure 93 Passenger cars produced by domestic producers (units) (ANFIA, 2024c)

Italy is also featured by the peculiarity, in the world of automotive, to have only one producer of assembled mass vehicles, namely FIAT/FCA. Only later, PSA started producing a limited number of commercial vehicles as well. The merger between FCA and PSA announced in 2019, however, led to the creation of the Stellantis group. Considering all the motor vehicles produced, thus including both passenger cars and commercial vehicles, Figure 94 shows the production volumes of the companies that are now included in the Stellantis Group, in the former FCA Group and in the former FIAT Group⁷⁸. It can be noticed that the volume in 2022 was roughly similar to the volume in the year of crisis 2009.

Moreover, it should not be neglected that the PSA production (quantifiable as the difference between the Stellantis and the FCA curve), likely receives at least part of the components from the French suppliers, meaning that the spillover over the Italian supply chain from PSA investment is likely to have been more limited (Camera dei Deputati, 2024). What strikes, in fact, is that the volume difference between the Stellantis curve and the FCA curve increased over time, meaning that the French component of the company lost much less than the Italian one.

This section will first outline the main problems incurred by the main “domestic” manufacturer. This will allow then to describe how the supply chain has reacted to the new contingencies. Eventually, the process of political bargaining and political mobilization around Stellantis strategies will be described,

⁷⁸ The category *FIAT Group* includes FIAT, Lancia, Alfa Romeo, Maserati and Iveco. The category *FCA Group* includes the *FIAT Group* brands plus Jeep and Dodge. The category *Stellantis* includes the *FCA Group* brands plus PSA. Ferrari is included in all the three categories until the year 2015, when the split between the company and the FCA Group took place. Although Iveco also split from Stellantis in 2022, for the graph the brand remains included in Stellantis.

in order to detail how the government and the stakeholders reacted to the automotive crisis. Eventually, I will conclude with some remarks on how Italian automotive can be informative for the broader story.

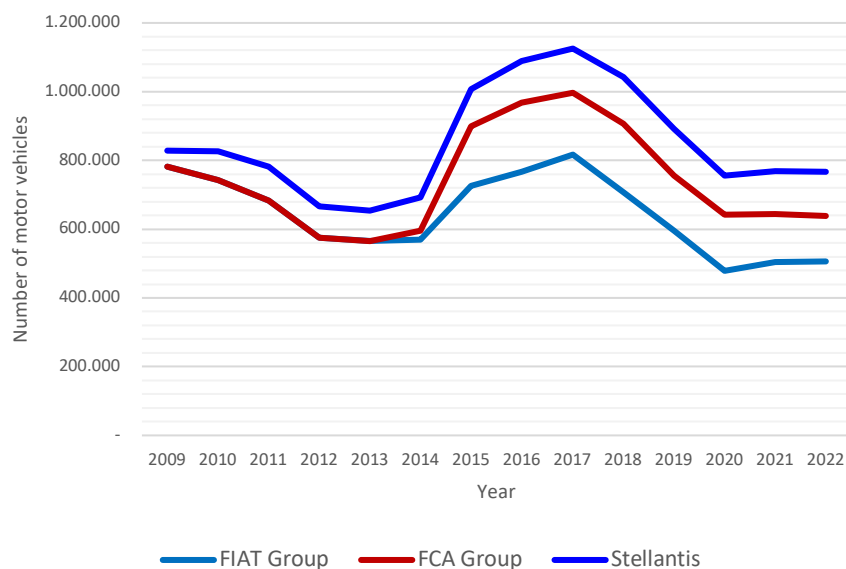


Figure 94 Motor vehicles production (units per year) (own calculations based on: ANFIA, 2024d)

As can be seen from Figure 95, the new conglomerate born by the fusion between PSA and FCA is an automaker still strongly oriented towards the European and North American market, which together accounted for 79% of the shipped vehicles. Italy and France account for roughly 10-11% of the total sold vehicles (Stellantis, 2024).

However, the last three years and the policy of forced electrification of mobility have contributed to strike a blow to the market position of Stellantis even in its markets of strength. The market share in Europe has declined from 22.1% in 2021, to 18.3% in 2023, with the fall including the more traditional “domestic” markets of Italy and France. Furthermore, differently from what seen for German carmakers, the Chinese market did not represent a growth opportunity for the company, whose already low market share of 0.6% in 2021 fell down to 0.3% in 2023 (Stellantis, 2024).

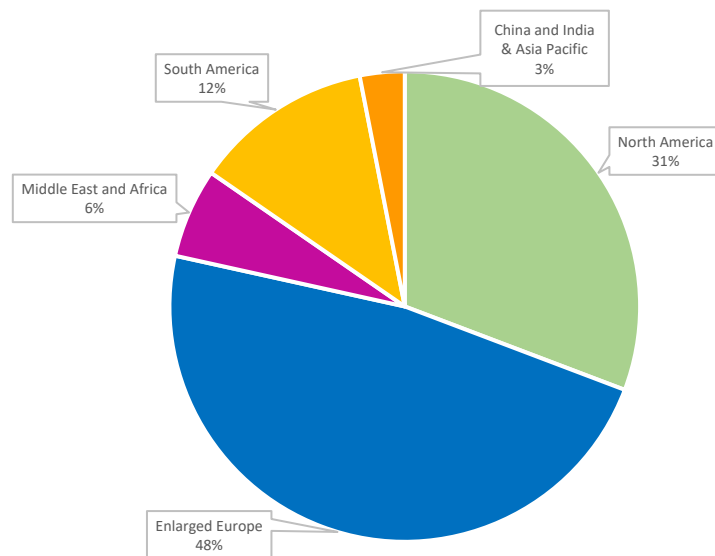


Figure 95 Share of vehicles sold per market in 2021 (Stellantis, 2024)

Producing for the mass market, traditionally price sensitive, the conglomerate has remained squeezed between rising factor costs of production (e.g. raw materials, energy) and a very aggressive competitive environment.

“Our ability to maintain or increase pricing has impacted and will continue to impact, our results of operations and profitability (...) Increased competition, however, is expected to drive a challenging pricing environment in the global automotive industry for the foreseeable future” (Stellantis, 2024: p. 55)

Looking at the several operating income walks of Stellantis, it can be seen that, between 2021 and 2023, the business operating income was positively influenced mostly by the European, North American, Middle East & African and South American divisions, while the “China and India & Asia Pacific” division contributed marginally or reported losses. (Stellantis, 2024). The main decisive factor was the ability to charge higher prices despite declining volumes.

The process of electrification also entailed in itself further pressure on margins. In fact, consumer prices for BEV and PHEVs are much higher compared to ICE vehicles, mostly due to the high costs of batteries. This has meant that profit margins have to be shrunk in order to avoid a sharp fall in demand, which has fallen due to high interest rates and an inconsistent policy of EV demand stimulation. As a consequence, BEVs and PHEVs are much less profitable compared to ICE vehicles. Moreover, the lower production costs for Chinese producers and a general global situation of overcapacity added to pressure on margins (Stellantis, 2024).

Most decisive is the laggard position of the company in technological terms on the EV market and the uncertain outlook of current investments. The forced push to electrification compelled the company to rapidly undergo very risky and very expensive investments in relatively short time, whose outcome is uncertain.

“Technological capabilities acquired through costly investment may prove short-lived, for example, if technology and vehicle capability progresses more quickly than expected” (Stellantis, 2024: p. 102).

“We may not be able to effectively compete with other automakers with regard to electrification, autonomous driving, mobility, artificial intelligence and other emerging trends in the industry” (Stellantis, 2024: p. 103)

At the present time, therefore, the structural position of the company exerts thus, per se, strong pressure for disinvestment world-wide, since volumes are erratic and margins are shrinking.

This is already exerting pressures on the Italian supply chain. As shown in the previous chapter, Italian suppliers have been diversifying their customer base and oriented increasingly towards foreign OEMs. The last years of this analysis have been featured by a further weakening of the dependence relationship between the supply chain and Stellantis. In 2023, Stellantis accounted overall for 35% of the supplier’s revenues.

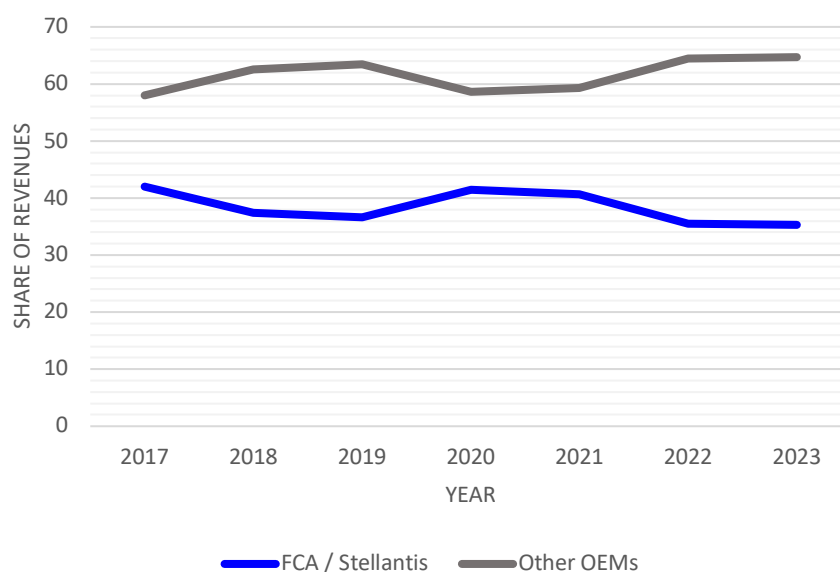


Figure 96 Average share of revenues from FCA/Stellantis (ANFIA Observatory, 2018-2024)

Due to the specific situation of having a single assembler present domestically, relying on foreign OEMs meant exporting. As already shown, this did not mean a boom in the Italian export of intermediate parts, but it rather meant keeping the levels of revenues fairly constant over time. In 2023, 79.4% of the

suppliers were exporters and, on average, export weighted for 46.2% of their revenues⁷⁹ (ANFIA, 2024a). As by 2019, the geographical composition of the Italian export looked as shown in Figure 97.

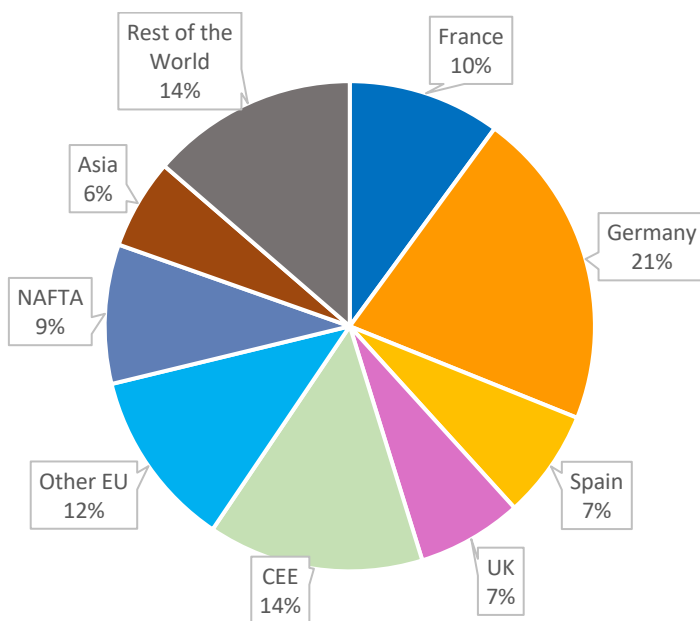


Figure 97 Country share of Italian motor vehicles' components exports (own calculations based on ANFIA, 2024a)

Germany is, by a wide margin, the largest export market. The impact of German OEMs on the revenues of the Italian supply chain is nevertheless understated by this picture.

Among the customers different from Stellantis, 60% of Italian suppliers deliver to German OEMs, followed with 28% by French OEMs (ANFIA, 2024a). Moreover, the largest Italian suppliers also increasingly tended to place production plants closer to their customer OEMs plants abroad, specifically due to reasons of providing flexibility and due to low convenience in exporting due to low margins in relation to relatively high transportation costs (Interview 71). A case in point is the largest Italian supplier, Brembo, which has undergone a strong internationalization process following similar developments among OEMs. In 2023, only 9.3% of the total Brembo revenues came from the Italian market, with the largest markets being Germany (19.3%), China (14.1%) and NAFTA (27.7%) (Brembo, 2024). Furthermore, company reports also point to the strong international nature of the company, with slightly less than 4.000 of the 13.654 employees being employed in Italy.

⁷⁹ The actual value may be lower in the general population, since this estimate is based on an ANFIA survey reporting a response rate of roughly 20%, but at the same time representing different types of suppliers, thus potentially controlling for heterogeneity in business lines. Although the real value may be lower, the reported export share is thus considerable.

This geographical reorientation is of fundamental importance when analysing the challenges Italian suppliers have been facing in the new phase that opened in 2019 and in particular stemming from the so called “internal combustion engine ban” decided by the Commission for 2030. Here, the structural position of Italian suppliers in the international division of labour in automotive makes so that the process of electrification of mobility poses an existential threat for the supply chain.

First, the more direct challenge is due to the fact that roughly 64.8% of the suppliers reported a “medium-to-high” positioning on the internal combustion engine market, as contrast with only 29.2% of electric and hybrid vehicles (ANFIA, 2024a). This technological dependence, which is also an effect of the past rejection of FIAT for electric technology, has posed an existential shock to the supply chain that started already delivering its effects in 2023, when the share of electric and hybrid vehicles produced raised to 62% (ANFIA, 2024a). It should also be noticed that, for perspective investors, a market consideration also would daunt new investment in the country. In fact, the Italian market has shown a relatively low demand for fully electric vehicles (BEV) (3.9% of the market share) as opposed to traditional hybrid vehicles (38.7%).

Second, the increased reliance on foreign OEMs, and specifically German OEMs, creates a strong liability for the domestic suppliers in times of change. In fact, OEMs had previously tended to outsource a large degree of investment, also in R&D, to the supply chain (Interview 70). More recently, this pattern has changed due to the fact that electrification entails a shift back to insourcing of a large part of investment and R&D activity (Interview 70). In fact, since electric vehicles require a much lower number of components compared to an internal combustion engine vehicle, large OEMs started having excess personnel, part of which they are trying to re-skill for working on new technologies (Interview 70). Moreover, local industrial policy in the home country of large OEMs, France and Germany, clearly attempts to incentivize the stabilization of the domestic supply chain. While France actively tries to strengthen and integrate its own supply chain, in Germany the state participation in Volkswagen is a non-negligible element of influence for the maintenance of the local supply chain (Interview 8).

Dependence has thus become a liability when it comes to the re-specialization of Italian suppliers, especially for a country whose main historical manufacturer did not leave positive legacies in the new technology. Moreover, in the short term, suppliers are struggling to charge higher prices to OEMs to compensate for higher production costs (ANFIA, 2024a).

In terms of policy advocacy, according to an ANFIA survey, the current policy priorities expressed by the supplier companies are the continuation of the measures for the containment of energy costs (79% of the respondents), financing for R&D (75%), the establishment of a fund in support of the automotive transition (68%) and measures to stimulate demand for new vehicles (60%). Interestingly enough, the survey highlights how 56-68% of the respondents declared that the government should take an active role in coordinating and managing supply chains, define a policy of attraction of foreign OEMs, and

promote the opening of new markets. A share of 39% also gave high relevance to a policy of stimulating aggregation in the sector.

If one would try to make sense of the Italian automotive scene just by looking at how the policymaking process has unfolded, the decoupling just described between Stellantis and the general system of production would be much less visible. In this respect, it can be particularly informative to describe the unfolding of the events starting with the Stellantis fusion.

As a preamble, it should be observed that the drop in the number of vehicles produced can only partially be justified with the general results of the FCA/Stellantis groups. In fact, at the global level, the FCA Group sold, between 2014 and 2019 consistently between 4.6 and 4.8 million vehicles. The number of vehicles produced overall is thus more erratic than the total sales, which may have to do with the model specialization chosen by the management for Italy (FCA, 2017; 2020). Furthermore, this process went hand in hand with the gradual loss in relevance of the Italian market for FIAT overall. While in 2004 the Italian market accounted for around 38% of the vehicles sold by FIAT, with the Chrysler fusion and the repression of demand on the Italian market this percentage dropped to 10% in 2012 (FIAT, 2005; 2013).

Therefore, the internationalization process of FIAT entailed both the change of the main markets of reference and a prioritization of other production facilities abroad. This nonetheless, in the years after the FCA merger, the government still could engage in negotiations with Marchionne, obtaining at least some short-term commitments (Interview 49). Things nevertheless precipitated quickly after the death of the FCA CEO in 2018.

After Marchionne, the new management led by Mike Manley and John Elkan proceeded with surprising speed in a move of merger of FCA with the French Groupe PSA (Peugeot S.A.). The new conglomerate took the name of Stellantis and the fusion was completed between 2019 and 2021. The merger was motivated by a strategic reasoning of both obtaining a player of a critical size to compete on the global market and for some complementarities between the PSA and FCA duo. While PSA could obtain access from a better position to the American market and consolidate its position on the European market, FCA could import the technological know-how of PSA for electric vehicles, a field where Marchionne was never eager to invest because FIAT and Chrysler were allegedly “poor” brands (Il Sole 24 Ore, 2021h).

The Stellantis fusion added further complexity to the power constellation directing the group investment decisions and thus to the possibility of the Italian government to have an advantageous dialogue with the management (Interview 49). In particular, the complexity is added by the influence exerted by the French part of the new conglomerate which does not only include PSA, but also a the French national development bank Bpifrance, with a 6% share (and most recently 9% of the voting power). Considering that the French government has been an active industrial policy player in automotive (Interview 70), this should have been a matter of concern in a perspective of maintaining occupational levels, especially considering that the new manager Tavares was a known cost cutter.

Surprisingly enough, the “developmentalist” Conte government did not move an eyebrow. Conte and the MISE Ministry Patuanelli simply argued that this was a “market operation” and that the only important red line was the respect of the previously agreed industrial plans (HuffPost, 2019). The trade union FIOM-CGIL objected that “[w]hile the French government has demanded that any potential agreement safeguards workers and production, including the supply chain, in Italy there is a lack of attention to a merger that will have repercussions on the entire Italian industry” (Huffpost, 2019).

This is particularly puzzling since, as previously mentioned, automotive was allegedly a priority for the Conte governments (Interview 50). The inactivism in the Stellantis case seems to be puzzling, and any univocal explanation seems to miss the point.

One part of the explanation is that Italian government had surrendered to the fact that the transnationalization of FCA made it difficult to control and Stellantis only added a further layer to this story (Interview 49). In this respect, it is reported that the industrial policy had started to be, already before the Conte government, not anymore oriented to the big players, but rather oriented towards the whole supply chain (Interview 50). The transformation of the industrial structure of Italy towards the role of supplier “[i]s something that has already happened, there is no way to return back now” (Interview 50).

Second, and perhaps most crucially, such operation would have figured as fundamentally hostile to other Stellantis shareholders, who would not have supported it. This would have differentiated a hypothetical Italian intervention from what the French government undertook in 2014 when it acquired a 12.5% stake in PSA. In that context, PSA was in a fully-fledged crisis and required state aid to ensure its survival. A hostile state intervention may also have endangered the stability of the company share values on the market.

This kind of intervention would have required a very large investment volume amounting, considering market data, to at the very least 2 billion euros. Considering that one of the most demanding industrial operations of CDP, Salini Impregilo, required 250 million euros, a multi-billion operation would have had at least some resonance and possibly raised some political opposition within the government itself. Not least, this may have attracted further the attention of the Eurostat on CDP as an under-cover instrument of state intervention. However, considering that CDP invested several hundreds of millions of euros in to increase its stake in Telecom Italia spa (TIM), the consideration on the expensiveness of the operation holds only to a certain extent. Moreover, after 2020, the pandemic emergency made fiscal rigour rules and the merger supervision more relaxed, making spending considerations less salient (Interview 50).

All these three factors together are likely to have converged in influencing the reticence of the Conte government to intervene in Stellantis, although the complete inaction in the case remains perplexing.

The Conte government nevertheless lived very short after the merger was concluded in 2021. The Draghi government was even more indifferent to the issue. This despite the COPASIR, the parliamentary committee responsible on matters of state security, warned in its yearly relation to the parliament that, as a result of the Stellantis fusion “*[t]here is a shift in the control centre of gravity of the newly established group towards the French side, with already evident impacts on the supply chain connected to the production lines of the Italian plants.*” (COPASIR, 2022: p. 72)

Furthermore, the report suggested that “*[a]n involvement of Cassa Depositi e Prestiti could be considered, whose potential entry into the industrial group might facilitate a rebalancing of influence between the French and Italian components, thereby protecting technologies and employment*” (COPASIR, 2022: p. 72).

The Draghi government nevertheless widely ignored the issue of ownership. The government took nevertheless considerable action to support domestic suppliers at the verge of the energy crisis, with the special measures of March 2022, which constituted a new fund specifically for automotive “*[t]o promote the green transition, research and investments (...) aimed at the establishment, conversion, and upgrading towards innovative and sustainable production methods (...) and advancing digital development, as well as for granting incentives for the purchase of non-polluting vehicles and promoting material recovery and recycling*”⁸⁰. The fund was equipped with 700 million euros for 2022 and 1 billion euros for each year between 2023 and 2030, for a total of 8.7 billion euros. Moreover a 40 million euros fund for incentivizing the installation of electric charging stations was introduced (Il Sole 24 Ore, 2022b). Considering that not even the 2009 crisis resulted in an institution of a dedicated automotive fund, this made up a remarkable advancement for the sector, especially considering its relatively generous endowment.

The issue of ownership started however powerfully to enter the debate again in 2023, when the commitments of Stellantis for the Italian system started to falter. Urso then accused Stellantis to have an investment plan strongly skewed in favour of France

"Today Stellantis produces 1 million cars in France and only 473,000 in Italy. Production levels also need to be brought to 1 million cars, reducing what is currently an unsustainable gap between production and the national market" (Il Sole 24 Ore, 2023j)

The Meloni government thus tried to coordinate with ANFIA for a plan regarding the relaunch of Automotive (ANFIA, 2023). Although there is no specific text of the agreement available, the written sources seem to point to a very loose arrangement, where the only “hard objective” stated is to bring the domestic production of motor vehicles to at least 1 million. The agreement raised the protests of trade unions due to their exclusion from the process (RaiNews, 2023). What is interesting is that the agreement

⁸⁰ DL n. 17/2022, art. 22, c.1.

included a commitment by the MIMIT to engage in negotiations specifically with Stellantis in order to devise a development plan for the increase in the volumes of cars produced (ANFIA, 2023). On its side, Stellantis argued that the company would be available to double the production volume in Italy to 1 million autos conditioned to states subsidies (Il Sole 24 Ore, 2023e).

In 2024, the company announced the suspension of the activity of some productive plants in Italy (Il Sole 24 Ore, 2024v).

The calls for state intervention in the company started thus intensifying, this time even on the side of the business organizations. Most untypical, the ANFIA and the Confapi⁸¹ presidents overtly expressed in favour of a direct state intervention to counter-balance French influence (Il Sole 24 Ore, 2024v; Il Manifesto, 2023). Trade unions also requested again a direct intervention of the government, with a convocation of the Stellantis manager Tavares (Il Sole 24 Ore, 2024u). Metalworker trade unions also engaged in strikes asking for a new developmental industrial policy that would avoid offshoring (Il Sole 24 Ore, 2023i; 2024l).

Among the concerns expressed by the unions, the demand Stellantis is pushing to its Tier-1 suppliers to offshore production in Morocco and Tunisia (Il Sole 24 Ore, 2024l). However, at the beginning of 2024, acquiring a stake in the company was estimated to cost around 4 billion euros, namely much more than during the Conte government (ANSA, 2024a).

With the Stellantis crisis unfolding, the government decided cut by 4.6 billion Euro the “Automotive Fund”, raising protests by ANFIA, which stated that this fundamentally nullifies the work carried out through the roundtable on automotive (ANFIA, 2024a).

The Minister allegedly justified the cut by saying that *“bonuses for ecological cars drain state finances but do not solve the problem.(...) This year, we invested one billion euros in agreement with Stellantis, which had claimed that the measure would increase production in Italy. Exactly the opposite happened, and therefore, as previously announced, we will not repropose it.”* (Il Sole 24 Ore, 2024w).

According to the minister, the government would be eager to replenish the fund’s resources. However, not to fund incentives, but for sustaining the productive investments of businesses of the supply chain (Il Sole 24 Ore, 2024y). Meanwhile, the government also undertook talks with BYD after the tensions with Stellantis (Il Sole 24 Ore, 2024r).

In December 2024, following the publication of the very negative results of the last year of administration, the CEO Tavares eventually resigned. At the time of writing, the government obtained

⁸¹ The Confapi (“*Confederazione italiana della piccola e media industria*”) is a business organization representing small and medium-sized enterprises and with a self-assessed membership of more than 100 thousand enterprises.

some general commitments by Stellantis to invest in the country, but the outcome of this bargaining phase is still widely open.

At this point of the story, it is possible to make a general assessment of how Italian industrial policy in automotive has adapted to the new global conditions.

The first observation that strikes the observer is how the gradual decoupling of the supply chain from Stellantis did not follow a lower political salience of Stellantis.

Some interviewees pointed to the fact that *the way* in which industrial policy of the sector is thought of has been changing. While previously it was overwhelmingly targeting the “national player”, today the goal is mostly to bring the supply chain to hold a competitive position on the global market and to attract customer OEMs (Interviews 50, 70, 71). This kind of policy is vertical but also more bottom up. The statement of Urso regarding the end of demand side incentives also provides sign of a reorientation of the way in which industrial policy for the sector is thought.

However, Stellantis remains the most important player in the country and 69.4% of the suppliers have at least a certain degree of exposition to Stellantis in their portfolio (ANFIA, 2024a). Moreover, it is the only producer with assembling factories in Italy, giving it inherently a certain structural power vis-à-vis the government.

Therefore, it is not so much the focus on Stellantis to be surprising, but rather the sort of exclusivity of this focus, which is only punctuated by discussions on potential “second manufacturers” which nevertheless are still far from taking the shape of real perspectives. This clearly points to the fact that the home government factor still matters. For the Italian government is still easier and more accessible to bargain with Stellantis, also due to path dependent legacies, although this is often seen critically.

“Italian governments have long suffered from an “only child syndrome”, when it comes to automotive” (Interview 70).

This focus on Stellantis came with a rising pressure for the government to step in and even calls for direct ownership of the company. All the governments however rejected this perspective. The current minister of MIMIT Adolfo Urso argues that it is too late and this step had to be undertaken at a previous point. This argument is not convincing, even considering that the drop in the company value on the stock market did not lead to any reconsideration of this option by the government, which follows the non-interventionist stance of the previous Draghi government. What has been done so far is mostly a continuous and largely fruitless process of moral suasion and bargaining with the company, although clear signals have come from the national stakeholders to undertake further steps. There is strong need of a strategy and of taking further action, but the outcome is not to be seen.

The power relations or the political reasons underlying this consistent government passiveness are unclear from the material gathered. Beyond the previously hypothesized reasons (hostile takeover,

expensiveness and resignation), it should also be considered that it is far from certain that buying a stake in the company would serve the purpose of maintaining the investment levels. On the opposite, it may well trigger retaliation on the side of the management due to the hostile nature of the operation, perhaps leading to actual layoffs. In fact, it should not be forgotten that operations such as the one that led the French state to have stake in Peugeot occurred in times of crisis, when Peugeot actually needed a capital injection to survive. Although this is not yet the case for Stellantis, the precarious market position of the company may at some point lead to a call for public capital to be mobilized.

There are thus two ways in which the failure of the Italian state to intervene may be interpreted. The first one, as mentioned, is related to the low structural power of the state vis-à-vis the company. Italy represents only 10% of the vehicles sold by the company and an equally low percentage of the production capacity. Stellantis underwent, analogously to Volkswagen, a strong internationalization process, although with a much different, and less advantageous, strategic positioning. For Italy, Stellantis represents virtually 100% of the assembling capacity. The recent attempts of the government to involve Chinese producers may be seen as a way to escape this condition of dependence.

Another interpretation is simply that automotive may just not be an urging priority in industrial policy terms, although the broader public debate may suggest otherwise.

Evidence gathered through interviews in this respect is highly mixed.

For some interviewees, political attention to the sector is high, although related industrial policy is still missing and there have been strong time inconsistencies (Interview 70).

For others, automotive lost remarkably in importance over time, and de-facto the ambition to remain an automotive location has been given up for good. Automotive is just one among the others.

“Governments are also starting to be tired of subsidizing automotive, as you see, because it does not carry an effect (...) there is still someone once in a while who comes up with saying “we should relaunch automotive”, but this is mostly a relic of the past” (Interview 62)

This resonates well with the strong inconsistency in the management of the automotive fund, which was cut almost overnight in October 2024.

It also resonates well with the inability of the government to design another industrial policy instrument, more supply-side oriented, that would fit the goals for the sector. In this respect, it is interesting to point out that the existing instrument of the *“contratti di sviluppo”* is scarcely usable for automotive, since the supply chain is overwhelmingly placed in regions of Northern Italy, which are not under the special exemptions by state aid rules allowed by EU developmental policies (Interview 70).

8.6) A brief moment of glory: the temporary recovery of the construction sector

The construction sector was starting to experience, at the end of the 2010s, some very timid signs of recovery after the very long recession following the 2011 debt crisis. As shown in the previous chapter, the low-interest rate policy was not enough to help the sector's recovery, and the sector suffered from a considerable credit crunch and drop in orders in all of its segments.

The most considerable policy developments for construction were those previously described and associated with the Superbonus 110, as well as the government-driven relaunch of the WeBuild as the largest sectoral player. The subsequent Meloni government firstly reduced and then phased out these incentives, thus reversing the construction frenzy of 2021 and 2022.

In this section, I will try to give more context to the previously mentioned facts, in order to frame them in the overall development of the sector.

To begin with, it is important to mention that the Superbonus 110 did not benefit all the segments of the construction sector in the same way. Looking at the investment levels for different segments helps have an overview (Figure 98).

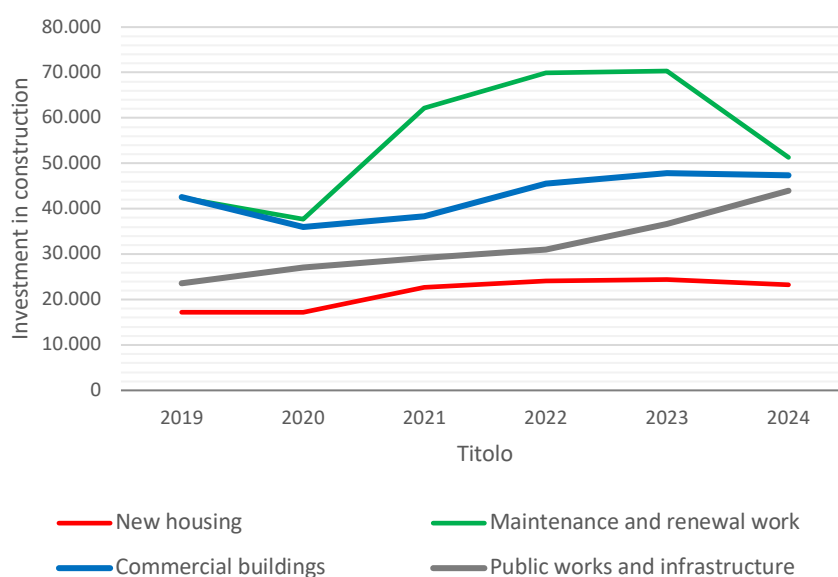


Figure 98 Investment in the construction sector by segment (mln, EUR) (ANCE, 2024a)

Considering that the main aim of the Superbonus was to renovate the existing stock of housing, especially in order to make it more energy efficient, it does not surprise that the main segment benefiting from the intervention was that of maintenance and renewal. Compared to 2019, investment in this segment increased by 65%, as compared to 40% for new housing, 6% for commercial buildings and 31% for public infrastructure.

The fact that the Superbonus was predominantly advantaging that segment of the sector is also confirmed by data on newly extended mortgage loans in the period (Figure 99). Two facts can be grasped from the figure below. First, at its peak new housing loans increased by 26% in 2021 compared to 2019, which is considerably more moderate compared to the overall growth of the residential construction sector. Second, the mortgage volume started contracting back already in 2022.

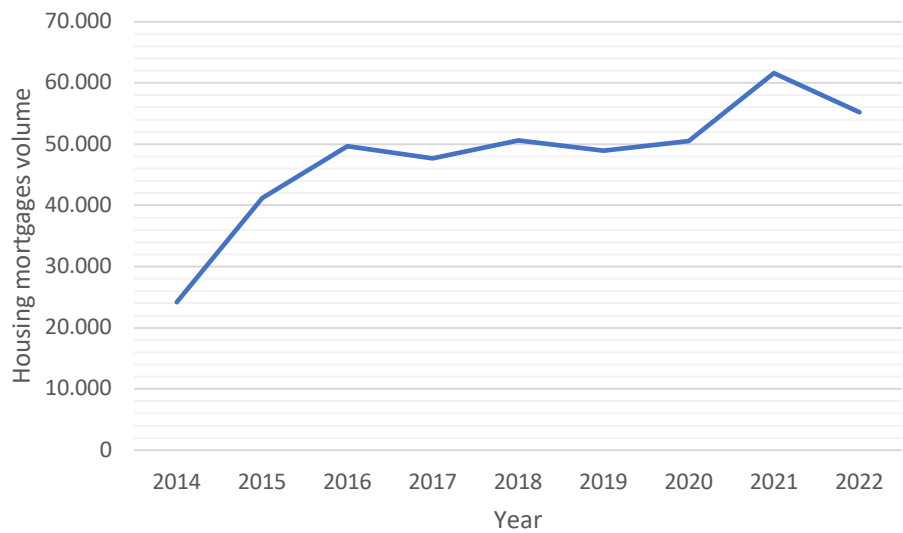


Figure 99 Housing mortgages volume (mln, EUR) (ANCE, 2024a)

Overall, the relative importance of the maintenance and repair works segment of the construction industry rose from 36.5% of the overall investment in 2019 to 39.6% in 2023 (ANCE, 2020; 2024a).

Moreover, it is also considerable that the construction boom did not come with an appreciable increase in lending to construction companies, which is often of fundamental importance for large scale projects and that it would be expected to rise in a period of boom (Figure 100). As the ANCE (2024a) report points out, in 2007 businesses from the sector enjoyed a financing volume of 52 billion euros, compared to the 12 billion euros of 2022.

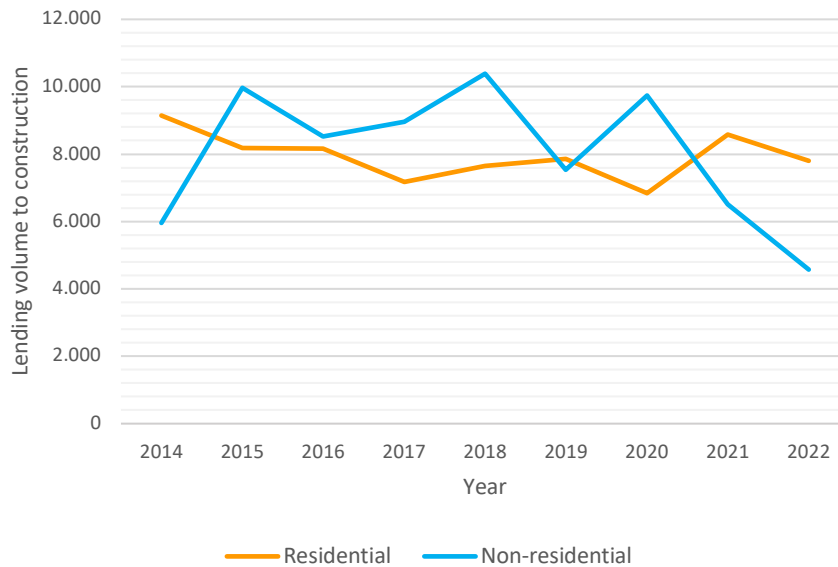


Figure 100 Lending volume to the construction sector by segment (mln, EUR) (ANCE, 2024a)

There are several reasons for which this analysis of the specific segments is of relevance for the scope of this work. First, it allows once again to state that the segments of the construction industry that are promoted through this kind of investment are those being weaker in “industrial” terms, namely the less knowledge-intensive and with the largest shares of micro-enterprises and self-employed (Interview 54). The data related to the rise in investment of public works and infrastructure is unrelated with the Superbonus and “policy as usual”, since it has to do with the funds from the NextGen EU plan (the Italian PNRR) and the end of the programming cycle for EU structural funds (ANCE, 2024a).

Second, the short-lived nature of these policies makes so that there has been no incentive for the companies to scale up and thus to go beyond the dimensional problem of Italian companies (Interview 55). This is a considerable problem in Italy compared to the largest European countries. In fact, the average number of employees in Italian construction companies is 2.8 and the average revenues is 417.862 euros per year (ANCE, 2024a). By comparison, in Germany the average number of employees in construction companies is 6.9 and the average annual revenues 970.761 euros. Furthermore, the percentage of construction companies employing 1 person in Italy is 62%, against 31% of Germany. This problem of scale, in turn, makes so that it is less easy for construction companies to be drivers of medium-to-long term development projects. It is considerable that this high fragmentation of firms in the sector has persisted even after the financial crisis led to the bankruptcy of a considerable number of businesses. In fact, the financial crisis was felt the most by companies having between 10 and 49 employees, whose number was in 2019 still 36.6% lower than in 2008 (ANCE, 2024a).

In general, there is scarce-to-no engagement of the government with the sector as such (Interview 55). This makes so that incentivization policy follows a “rollercoaster path”, meaning that promotion and

subsidization policies keep being introduced and withdrawn, with no possibility for the companies to plan long term (Interviews 54, 55). In terms of state finance, beyond the already mentioned modest CDP fund for social housing, the *Fondo di Garanzia* and *Mediocredito Centrale* are reported to have been effective in a counter-cyclical fashion (Interview 54).

This lack of strategy in addressing the sector does not have to do only with the sector per se, but also implies that the sector was not necessarily seen as strategic for its role as absorber of inputs by other sectors. I have previously shown that some segments of the chemical sector indirectly benefited from the Superbonus, while evidence is more mixed with respect to the steel industry. However, a major issue here is the fact that the nexus between the construction sector and the intermediate sectors has been partially disrupted by the broader competitiveness crisis. I have shown, for instance, that steel imports increased even faster than domestic production, due both to pricing and to the rapid rise in orders. There is evidence here of a contrast between the attempts to protect the steel industry by controlling imports and the need of constructors for steel. In fact, in 2021 ANCE complained of the imported steel that was being blocked in the dockyards due to import control (ANCE, 2021b). The effect of construction as an absorber of domestic intermediate inputs has thus been relatively weakened as an effect of the overall changing competitive field.

We have thus seen, over the whole narrative, that the construction sector has been seen and addressed strategically only at certain timepoints. To which extent this is not a side-effect of the expensiveness of the support schemes of the construction sector?

This is a strong competing explanation in the Italian case, since the sector started its declining path specifically due to the drastic cuts in public investment, and began to be stimulated again in the period of the temporary crisis framework. The budget-heaviness of such stimuli has factually become highly politicized and led to the phasing out of the Superbonus scheme.

Budget constraints have certainly limited the extent to which the sector could be used to foster economic growth. However, this explanation alone appears insufficient when confronted with further elements of analysis. I documented here that the sector has scarcely been addressed strategically, independently of the budget heaviness. The only government to have framed the sector in these terms was the Conte government through its operation with WeBuild. Public banks were only marginally mobilized in support of real estate and housing, and there were not considerable reforms for deepening the domestic financial market. In this respect, it is also considerable that the ministry of reference for the construction sector is the MEF, rather than the MIMIT, which may inherently lead to the observation that politics has interacted with construction mostly as a channel to spend public resources, rather than a sector to address strategically.

The interview sources I gathered do confirm factually that the construction sector has been addressed strategically only in the case of WeBuild, while the broader orientation has been to use it at the

occurrence as a countercyclical instrument (Interview 54). Moreover, especially with respect to the Superbonus, there may have been electoral considerations at stake, considering that the generosity to which the audience of beneficiaries was extended created very large inequities mostly advantaging the wealthy middle class.

8.7) Conclusion: Italy stuck in the competitiveness crisis

After this detailed narrative of the Italian case, it is now possible to relate it to the overall analytical objectives pursued in this study. As already done with the German case, I will try to take stock of the lessons we can draw on the effect of the economic-structural aspects, proceeding then to the issue of disembeddedness and state capacity. How does the lack of core sectors and of very large players affect the way Italian policymakers think of industrial policy?

Both the interview and document analysis conducted for the Italian case show a very fragmented and variable configuration of what is considered as a core sector by policymakers. An interviewee expressed it simply but effectively:

“And then I dare you trying to figure out what counts as a strategic sector in Italy!”

(Interview 44)

There is thus a general difficulty in taking the bet to invest in certain sectors, because there is also high uncertainty regarding whether intervening in such sectors will eventually be effective for economic development. If at all, the tendency has been for policymakers to be even more confused regarding core sectors, especially after the decline of domestic automotive (Interview 62).

The “new sectors”, like artificial intelligence, are in several instances evoked as important, especially for their effects on productivity. However, the way in which the importance of these sectors is framed tends to be fundamentally different from what I observed in the German case, both in the document and in the interview analysis. While in the German case the general argument was that new sectors had to be strengthened for their spillover over core sectors, in Italy this connection does not seem to be particularly straightforward.

Furthermore, this connection between “traditional” and “new” sectors appears to be structurally laxer in the Italian case. For instance, discussing the value of the startup economy for the general Italian system of automotive, an interviewee argued that *“[I] really do not think this is an aspect of high relevance in Italy... maybe for larger companies, some of which did recently introduce start-up programs, but for the kind of size we are generally dealing with here, I think the impact is minimum”* (Interview 71)

Furthermore, in the German case digitalization and traditional sectors tend to be more integrated in real programs that are co-financed with the BMWK, whereas in Italy the approach is distinctively less targeted.

The actual policies show even more markedly the lack of a pattern of support when thinking in sectoral terms. Strategic addressing of the sectors tended to be short-lived or highly contingent on the vagaries of electoral politics. A case in point was the management of the ILVA case, where the next government would question the arrangements agreed by the previous government.

Even the lending programs and interventions of CDP have often been considered to be excessively untargeted (Interview 62).

“They write on the website that they do this or that, but to be honest... I really doubt that if some groundbreaking innovation is going to emerge, it is going to come from them (...) they give a little bit to everybody” (Interview 62).

Despite the overall lack of a strategic vision, Italian governments did engage in some forms of vertical industrial policy. It is undeniable that steelmaking and automotive have been important sectors where governments repeatedly engaged in sustained bargaining efforts. These were nevertheless overwhelmingly compensatory and by no means oriented at an active relaunch of companies or sectors in crisis.

In steelmaking, the state intervened as a sort of auctioneer, whereby it would take control while waiting for new “credible” investors who nevertheless have systematically failed to materialize. The most obvious case in this respect is the ILVA and Piombino plants, where the government tried to use the *amministrazione straordinaria* instrument to bridge companies to the next investor. In this respect, the government avoided to take up the entrepreneurial role on itself, and framed its intervention as just a temporary disturbance and, by doing so, jeopardized the development perspectives of these companies. In the ILVA case, this changed only with the Conte government, when a more active role of Invitalia was envisioned and the government started thinking of the sector more strategically, as also shown in the process of policymaking that led to the creation of an agency of direct induced iron (DRI Italia).

In the automotive sector, the state has engaged in repeated negotiations earlier with FIAT, then with FCA and then with Stellantis. Germano (2012) previously accurately described how the Berlusconi government set a further moment of rupture between FIAT and the state, which “emancipated” the company from governmental influence. Although the focus of Germano is on the role that subsidization played in maintaining the connection between the Italian state and the company, a perhaps more important controversy was the system of industrial relations, that Marchionne aimed to reform in order to strike down on union power. Marchionne broke not only with the Italian government, but also with the Confindustria system (Interview 67). The Renzi government, however, conducted a re-approaching of FCA-FIAT, which was nevertheless based on a groundbreaking attempt of Renzi to break the

advanced Italian labour legislation. This sort of exchange was fitting the overall externally imposed orientation of post-crisis governments, who attempted to keep foreign competitiveness by means of internal devaluation. More than a strategic plan, then, FCA returned to temporarily invest in Italy because of compensatory measures in the form of aggressive labour market liberalization by the government. The company commitment did not outlive however neither the Renzi government nor the FCA manager Marchionne. Stellantis thus set the last phase, in which governments have engaged in rather inconclusive bargaining for maintaining production levels, sometimes offering demand incentives in exchange.

It is considerable also to notice that strategic vision has been missing despite automotive suppliers and steelmakers have increasingly risen voices in favour of a more proactive industrial policy. In both sectors, industrial plans have been announced and a fund for automotive was established. However, the development of such initiatives has remained sluggish and repeatedly interrupted.

8.7.1) Nobody to talk to: the lack of large players and the rising prominence of state-owned enterprises

A second causal factor that I have identified as determining the strategic engagement of the government with a sector is the presence or absence of large players with coordinating capacity. In the interviews conducted, independently of the role and the function of the interviewed person, this factor was widely agreed to be very influential in determining the capacity to be noticed by governments and to be influential in policy decisions (Interview 46).

The two sectors where governments have engaged the most, in fact, were those with players of systemic relevance, automotive and steelmaking, although this was not sufficient to develop a strategic vision on these sectors.

FIAT remained an established player of reference for the government, despite the fact that suppliers have decreased their dependence on the carmaker and have thus been increasingly oriented towards exporting, especially to German players.

“... if FIAT has gone, what are the options? Doing industrial policy for the others?”

(Interview 50)

This gradual abandonment of the national system by FIAT has led to a very slow change in the way in which industrial policy for the automotive sector has been thought of in Italy. This shift entails a focus on the “productive supply chain” (*filiera*) (Interview 50). In this respect, it can be said that the Italian paradigm is showing some signs of change, adopting an approach that is more focused on attracting FDI, rather than relying on a national producer. This is already observable in the most recent attempt by

the MIMIT Minister Urso to open up to the possibility of a “second producer”, may it be American or Chinese.

In this respect, this paradigmatic shift would just equate to politics coming to terms with the peripheralization of Italian automotive. This would make the Italian approach, over time, more similar to the Spanish or the Central-Eastern European one, whereby state elites would need to engage in strategically in order to use the transnational policy space at their advantage (Šćepanović, 2020; Vukov, 2023). Such approaches require nevertheless a strategic capacity and effort that Italian governments have, so far, been unable or unwilling to engage in. Rather the opposite, the weakening of Italian automotive has led to a jeopardization of the support to automotive as a strategic sector, which has increasingly been questioned (Interview 62).

Furthermore, such strategies require a longer-term time orientation, which is impossible to conciliate with the fast pace at which the current automotive crisis is unfolding. Considering the urgency, the most recent government has adopted, so far, the typical approach of the “only child”, trying to persuade Stellantis to maintain high production targets in Italy with a mix of moral suasion and demand incentives like the *Ecobonus* (Interview 70).

With respect to steelmaking, the issue of the large players takes a completely different shape. Steelmaking is featured by a larger degree of dependence on the internal market and mobility of production plants is much more limited. Moreover, the sector underwent a considerable crisis and rising competitive pressures at the global level at an earlier stage of this story. The state thus intervened to bailout the ILVA, the largest blast furnace plant in Italy and one of the largest in Europe. As already mentioned, however, this did not come with a strategic orientation, but the government was rather concerned to keep the plant alive and, above all, the occupational levels stable. It is especially interesting, however, that the strategic importance and the sheer size of the ILVA plant managed to mobilize the steelmaking association Federacciai on the ILVA issue and make it advocate for the strategic relaunch of a player of systemic importance. Even here, however, a strategy for steelmaking has been several times spoken about in the media, but is yet to be seen and the process has been jeopardized by political instability.

Large players are thus overwhelmingly missing, but a specific segment of corporations managed to increase in scale and turn into large, internationally competitive players: state-owned enterprises. It is specifically interesting to recount the process that has led these companies to their present form. The 1990s were featured by a steep process of privatization whereby the previous gigantic system of state-owned enterprises, especially the IRI ones, was privatized. In these circumstances, governments tried to craft strong private or partially privatized national champions able to develop into internationally competitive conglomerates, with mixed success (Bulfone, 2017a; 2019; 2020a; Deeg, 2012).

The 2000s were featured by the deepening of the process of corporatization of these enterprises, which made them strongly independent and during which governments of every orientation largely avoided to intervene directly in their business (Interview 49). The post-crisis period, with the renewed interest for industrial policy, has seen a process of deeper interaction unfolding between the government and these corporations. This analysis has pointed out how this process of interaction is reciprocal, whereby the government would try to use and involve state-owned enterprises in its projects but, at the same time, state-owned enterprises have also been able to affirm an agenda of their own, and to support the government in the formulation and implementation of industrial policy plans where they could contribute (Interview 46). A specific advantage that is mentioned is that state-owned enterprises have allowed to remove a considerable amount of information gap with regard to specific projects (Interview 49). In this respect the “hard control” exerted by the government through shareholding also facilitated a relationship of trust between the government and these corporations. This constitutes a further benefit the state can achieve through its “ownership power”, which has featured the Italian way of forming stable shareholdings (Bulfone, 2020a). In fact, ownership power is here conducive to higher state capacity. I will go more in depth into this aspect at a later point.

Italian SOEs have however contributed to industrial policy in an even more subtle but highly specific way, namely through their own investment activity. For instance, they started engaging with the hydrogen economy before a government plan for it was designed, also as part of their diversification out of the fossil and natural gas activity. For instance, an interviewee argued:

“State-owned enterprises have done what the governments have been unable to do and to promote much of the needed investments”

(Interview 69).

In this context, the role of CDP has become increasingly important and invites to reconsider the way we think about entrepreneurial states. Initially a method to obtain revenues for the state budget, the sale of large shares of SOEs to Cassa Depositi e Prestiti seems to have had the unwitting consequence of gradually structuring a system. CDP has increasingly turned into a holding of state-owned enterprises. An interviewee argued:

“To a certain extent, CDP is a small-scale version of the former IRI, you will recall the period of the big state shareholdings... clearly with the due differences and with a much lower industrial expertise...”

(Interview 62).

This common belonging to CDP seems to have facilitated a process of loose horizontal coordination between state owned enterprises, as shown in the several joint projects between CDP and other participated companies, as well as in the role of CDP as financial partner of reference. The system so established has made so that CDP would act as a patient investor who guarantees financing even in conditions of downturn, and engages in corporate restructuring plans. In order to play this role, CDP had

to develop a considerable intervention capacity or, as the interviewee above mentioned, “industrial expertise”. Moreover, the profitability and continuous financial viability of SOEs has become a condition for CDP to continue operating profitably, making so that the bank would have an incentive in engaging in industrial capacity building.

Similarly, ENI engaged in this role of long-term investor in Versalis. The Versalis case is especially remarkable due to the richness of information it provides. ENI’s management has tried repeatedly to either scale down or to sell the chemical branch of its business, but political pressures managed to halt such attempts. Not managing to sell off Versalis, ENI decided to invest in an industrial plan to reconvert it towards higher segments of the chemical market being less price sensitive, including bioplastics and biofuels. Therefore, in the meantime, Versalis managed to create value even when operating at loss, in that it started patenting technologies which then have been leased to foreign operators.

This system is thus a draft of a modern version of what Shonfield (1969) observed to be true for the Italian IRI, namely a system of independent managers engaging in activities in complementary economic sectors and promoting developmental goals beyond the strictly economic ones. It is considerable in this respect that CDP has also undergone a process of at least embryonic focussing of its activity, which has more recently resulted into the targeting of “strategic productive chains”, several of which see the presence of state-owned enterprises (CDP, 2022b).

Therefore, state-owned enterprises, as the largest Italian corporate players, have gradually engaged in a process of what may be called a “privatized industrial policy”, whereby they influence industrial policy not only through their contact with policymakers, but also through their individual investment decisions which, when coordinated among them, can develop considerable synergies, especially considering the aggregate financial firepower that these companies together can make available.

These findings do not necessarily contradict the results of the recent report by the Commissione Imprese e Sviluppo, where it is argued that coordination between SOEs in a single strategic framework is generally poor (Commissione Imprese e Sviluppo, 2020). To begin with, the paper also considers companies under CDP to make up for a partial exception to this overall assessment. Second, what is argued here is not that a fully-fledged “hard” system of coordination is in place but that it has been gradually forming, especially over the last years.

8.7.2) Only a matter of structure? Competing explanations to the lack of Italian strategic engagement

Italian policymakers have struggled to find specific sectors to relaunch strategically and the general scarcity of large players has made the design and coordination of these policy efforts difficult.

It is legitimate to wonder, then, if this is the whole story to be told, or whether there are other competing explanations which may equally account for what has been observed in these pages.

An important aspect to be considered is that dimensional fragmentation of Italian enterprises comes with an equally strong fragmentation of business representation. Problems arise in understanding the real representative power of individual business associations.

“Italy has definitely a problem of business representation (...) if you sum all of them and the numbers they claim to represent, you would obtain something like 300% of Italian GDP and 200% of Italian companies... there is clearly a lack of credibility” (Interview 50).

What would be the scenario with stronger business representation? Would there be a stronger strategic engagement in industrial policy? The evidence at hand does not seem to point to this direction.

The interpretation I provide here rather reverses the causal order, inspired by Shonfield (1969), when he stated that *“[i]n any industry composed predominantly of small firms, the trade association is almost bound to become the spokesman for the views and spirit of the average business”* (Shonfield, 1969: p. 139).

Although Confindustria, overwhelmingly a manufacturing association, has been the most influential employers' organization in Italy, it does not carry a specific sectoral orientation with it, specifically due to the heterogeneity of its constituencies, which makes power within it much sparser. Moreover, the organization is itself torn by internal conflicts, as the discussion on the recent exclusion of Gozzi from the competition for the presidency of Confindustria has shown (La Repubblica, 2024).

It is also doubtful that the presence of corporatist institutions would have changed the outcome observed in Italy. However, I will deal with this aspect more specifically in the conclusion.

An important factor of complexity in the Italian case is that the field of contention in industrial policy does not only regard the sectors where to invest, but also, and perhaps especially, the need itself for a sectoral industrial policy. In fact, a further line of division is between a developmentalist and a market liberal elite.

While the former envisions the role of the state as having to intervene selectively and vertically in economic development, by targeting specific sectors, the latter sees state intervention as a facilitator of the market or as a fixer for very specific market failures. I have shown how this conflict has manifested in the case of CDP, where radically different conceptions on the role of the bank were represented by different managers.

This is a specific form of a conflict that has been identified by Marois (2022) the contested nature of the role of public banks in contemporary capitalism. However, in this specific case the issue is not so much whether to make CDP a profit-driven bank or a developmental bank. There is wide agreement that CDP

should have a public function. The disagreement is in the instruments and in the type of function that is envisioned for the bank, whether of gap fixer or of developmental agent.

It would thus be possible to argue that a strategic industrial policy has not been initiated because of a dominant political market liberal paradigm taking the upper hand. I find this explanation also lacking efficacy, at least for two reasons.

First, we have already seen in the German case how an overwhelming ordoliberal policy paradigm can go with strategic targeting of sectors, once the importance of such sectors is clearly defined. Second, even when more developmentalist approaches took the upper hand, like during the Conte government, the capacity to engage strategically with the sectors was limited.

Eventually, a strong competing explanation has to do with electoral politics at least in two respects. Following Beramendi et al. (2015) one may be inclined to argue that Italian strategic engagement with industrial policy did not take place because of the captive nature of economic policy in the country. Another line of argument may point to political instability as not granting the necessary conditions for planning long-term investment policy. As observed in the UK case, the situation may occur where one government would completely dismantle what the previous government did, thereby jeopardizing strategies over time (Coulter, 2022).

There is surely a certain influence of electoral politics on Italian industrial policy decisions. In this respect, several interviewees point to the fact that it is not only political continuity over time in terms of the “colour” of the government to matter, but rather the fact that there is a general lack of strategic vision. Moreover, the interview material also pointed to a scarce interest of policymakers to engage in industrial policy because of its long-term orientation and the related risk of advantaging the next government taking office. In a political context where there have been 8 governments in the last 14 years, this is a legitimate concern. It also helps explain the relatively limited short-term orientation of the government during the company crises that have been dealt with.

What is unconvincing of the electoral explanations is that governments did engage in industrial policy projects, what was missing was rather strategic capacity and a firm view on the sectors to promote. The electoral approach in both its interpretations would not help understand operations like WeBuild, or the several horizontal industrial policy measures that were introduced, such as Industria 4.0 or Industria 2015.

As a matter of fact, at least since the Renzi government, it was horizontal measures such as the *contratti di sviluppo* and the *Industria 4.0* to have shown the widest political consensus and to survive better to changes in the political balance of power. Conversely, if we would adopt the electoral view of the “captive” state as outlined by Beramendi et al. (2015), we would expect Italian industrial policy to have been only compensatory towards the “insiders”.

However, from the interview sources and the account given here, political change tends to jeopardize industrial policy plans considerably and also decisively affects the more independent CDP activity (Interviews 44, 43). The problem seems to be that every government comes with a different plan and with different priorities, which then they try to enforce in the relatively limited amount of time allowed by legislation. What however seems to determine this strong shift in priorities is the lack of a shared idea on the priorities in the first place and a general tendency to try to please everyone. We have seen in the German case, for instance, how political change from a conservative to a green Minister of the Economy did not lead to fundamental changes in the government plans.

Therefore, electoral politics seems to become a particularly influential factor only to the extent that there are no compelling reasons to choose a certain path.

There is however another factor that has influenced not so much the type of industrial policy attempted by governments, but rather its capacity to do so. In order to deal with this aspect, we thus have to shift to considerations related to how state capacity has changed in contemporary capitalism.

8.7.3) The uncontrolled disembeddedness of Italian capitalism

An important part of the argument advanced in this study concerns to the relationship between the state and national corporations and, specifically, the advancement of the process of disembedding of the national champions from the national economy. Did the state use more coercive instruments of industrial policy as part of a “counter-movement”? The answer is mixed.

In Italy, the epitomical case in this sense is FIAT, which has historically been the main Italian national champion and privileged partner for industrial policy of Italian governments. As explained by Germano (2012), the company undertook a sweeping strategy of internationalization that made it decreasingly dependent on the domestic market and increasingly international. Production was increasingly being moved abroad, to Poland, Serbia and Brazil, in the years of Marchionne and this process was only partially reverted during the honeymoon of the Renzi government. Stellantis represented the last step of this internationalization process, making FIAT an hybrid Italo-French corporation.

The internationalization of FIAT was definitely not only a matter of “quiet politics” (Culpepper, 2010). Rather the opposite, public indignation has often been voiced both by politics and the broader public, especially in consideration of the history of generous subsidies the company obtained by the past governments, as well as the usually cost-related reasoning behind offshoring. More recently, this has turned into open calls to intervene into the governance of Stellantis, especially in order to counter-balance the influence of the French government in the company which appears to have had industrial consequences.

Despite these calls, however, the government never really directly intervened in the company. The reasons underlying this decision are likely to be those explained previously, namely the economic risks related to a hostile takeover, the expensiveness of such operation, and the risk that the management of the company would retaliate. There is factually little that the government can do in order to coerce FIAT into maintaining its commitments, and the *golden power* should have been used at the time the merger with Stellantis was decided, with the connected shift of the legal headquarter to the Netherlands.

The government used car scrapping and ecological bonuses incentives as a compensatory policy, hoping that the demand so stimulated would convince the company to keep the investment levels. This old tactic has turned out to be ineffective for a series of reasons. First, the Italian domestic market is featured by particularly high shares of sales by foreign producers. Second, only few of the models produced by Stellantis are actually produced in Italy, meaning that the demand stimuli may not turn into higher revenues from domestic plants. Third, the Italian market accounts for a rather low share of the overall company revenues.

The state thus has overall few instruments and politicians have been cautious in engaging in direct forms of intervention, which is mainly explained by the high structural power of the company.

State ownership has nevertheless been used as an instrument of embeddedness of national companies and maintenance of occupational levels. State-owned enterprises tend, in fact, to employ considerable shares of their workers in Italy. For instance, despite the vast internationalization process it has undertaken, Fincantieri employed 52% of its employees in Italy in 2022 (Fincantieri, 2023).

The epitomical case in this respect is Versalis. It was shown in the course of the narrative how the nature of SOE of Versalis created the political expectation that its investment choices should be accountable to national politics, may it be represented by the parliament or by the government. This avoided that a dramatic amount of workplaces would have been lost in the process of conversion.

The Versalis case is also interesting because it shows the pressure between the need to internationalize and scale up of ENI and its nature of state-owned company. ENI is, in 2024, a company operating in 61 countries with 32 thousand employees, 66% of which working in Italy (ENI, 2024a). For a multinational corporation, this is a relatively high percentage. Similarly, I have previously shown how Versalis stands out in the chemical sector for its particularly high share of employees in Italy, compared to other chemical companies. In several instances the management attempted to get rid of the loss-making chemical branch. However, political pressure mounted every time such operations were undertaken and, even when a deal was close, the government made sure that ENI would retain considerable control on Versalis. It is easy to imagine that, if ENI was to be private, Versalis would have been sold, becoming once another case of an Italian company being taken over by a foreign investor with likely negative implications for occupation. In a period in which governments have grown increasingly concerned with

resilience in supply chains and the delivery of strategic resources, basic chemistry has also currently become a strategic asset, thus providing a further reason to maintain presence in the sector.

Similarly, the Italian government has also proven to be willing and able to intervene in the field of telecommunications. Beyond the crafting of a new national player, Open Fiber, which was a state driven operation, governments re-entered in Telecom Italia, cumulating a 9.2% stake in the company.

Moreover, we have seen how CDP intervened to avoid the acquisition of Ansaldo Energia by Siemens, and in tourism in order to maintain a strong presence of national operators in those sectors and avoid that strategic assets would be acquired. The Italian state thus used in several instances its direct power of ownership to re-embed capital in the national system by intervening at moments in which national companies were financially weak in order to bridge them to restructure and expand without them being prey of larger foreign players.

In this respect, the Italian case is considerable because state finance has often been mandated to fix this dimensional limit of Italian enterprises, by promoting their aggregation also by way of acquiring temporary ownership, as it happened in the cases of WeBuild, Bonifiche Ferraresi and SIA-NEXI. It is also considerable that many of these interventions were not politically coordinated and, when they were coordinated there was usually an interactive process between politics and the bank. We have seen how WeBuild was precisely a case of this kind, where the political will to promote aggregation in the sector was mediated by the expertise of CDP.

It is here that the contrast between “developmentalist” and “market liberal” elites particularly impacts the instruments used. While developmentalists consider that strategic shareholding should be maintained in the longer run, market liberals are in favour of a disengagement of CDP as soon as the initial objectives are achieved. The result of the struggle between these two tendencies will be fundamental in order to understand the model of industrial development that Italy will be pursuing in the future. Regarding this aspect, the short-term appointment of CDP CEOs, three years, makes so that time inconsistency easily arise with the change in governments (Interviews 50, 49, 62, 63).

However, CDP’s position in the system provides it with a certain capacity of resist political pressures. This leads us to face the peculiar case of the double meaning that the organizational development of CDP has had. First, CDP had to be reconverted from a bank predominantly focused on lending to municipalities and the state, to a real active player in industrial finance. This has required a process of rapid buildup of capacity, which has enabled CDP to become a player capable of own strategic capacity. By means of this expansion of CDP capacity, the Italian state also expanded its own capacities to intervene in the economy, which were weakened by the abrupt demise of the former extensive system of state-owned enterprises with its vast cumulated industrial know-how. A similar role was played by the other state-owned enterprises who have supported the state by compensating the information

asymmetries for projects of interest. Moreover, as mentioned, this has created a hybrid structure of state intervention, whereby politically driven projects are paralleled by the initiatives of individual SOEs.

This independent capacity of the bank makes so that there is at least a certain extent of shielding of the bank investment projects despite political change. It was already pointed out, for instance, how the WeBuild project was being discussed and analysed by CDP already before the Conte government. The growing expertise-based autonomy of the bank has made the decision-making process more dynamic but also more opaque and less politically accountable. Differently from the KfW, CDP governance does not have strong scrutiny mechanisms by stakeholders and very little is reported in the parliamentary commissions regarding its activity (Interview 69).

This complexifies our understanding of the Italian state, in that here the strategies are set at two different levels, mutually interacting but also acting independently. The government has all the power needed to advance its own preferred projects, which is exerted at the moment of appointing the manager and the higher ranks of the bank. However, the government also depends on CDP for this industrial capacity and is far from having complete information on the activities pursued by all of the state-owned enterprises, especially considering the political instability featuring Italian politics.

CONCLUSION

The overarching topic of this book is the adaptation process of advanced economies facing changing competitive conditions in global capitalism, which I investigated by comparing Italy and Germany.

In concluding this book, I will first summarize the main premises and the line of reasoning that leads from the changing global competitive field of capitalism to changing actors' strategies. Then, I will compare the findings for the Italian case with those for the German case, in order to detail how the variables that I have analysed are useful to understand differences in outcomes, and in order to spell out the elements of complexity. Eventually, I will relate my findings to the literatures on comparative capitalism and industrial policy.

The emergence of new competitive players from countries that are not in the traditional "core" of the capitalist world economy has placed the position and the pricing capacity of traditional core economies increasingly under stress. This can be described as a process whereby economies in the periphery and semi-periphery developed "core-like production processes" (Wallerstein, 2004) or as the entrance of these economies into the "global hierarchy of wealth" (Arrighi et al., 2003).

Considering the US case, Schwartz (2011) correctly pointed out that what matters in order to evaluate the competitive position of an economy is the control that domestic multinational corporations can exert over their production chains, rather than the performance of the trade balance per se.

There is nevertheless an important distinction to be made. In Schwartz (2011), there is some underlying assumption that domestic corporations are a projection of the power of the domestic economy. Internationalization will eventually have its positive spillovers for the domestic economy, directly or indirectly. However, that kind of outcome relies on conditions that are specific to the US context and hard to replicate (e.g. financialization, monetary hegemony). The challenge for national stakeholders, including the government, is thus to make sure that a part of the profits from the internationalization of national players keep spilling over to the domestic economy in absence of specific conditions that would ensure this to happen anyways.

For instance, studying the German case, Mitchell (2015) showed that German corporations tended to increase their offshore activity in periods of growth, in order to avoid a trade-off between maintaining workplaces in the home economy and hiring abroad, thereby keeping relatively peaceful relations with labour. This has allowed the persistence, at least in large multinational corporations, of part of the typical arrangements of the German model (Krzywdzinski, 2014).

The timespan studied in this book is however featured by a gradual increase in competitive pressure on the economies of advanced capitalism, which then extended to rising competitive pressure on the large corporations constituting the power base of these countries. In turn, this competitive readjustment has

led to contestation, by large corporate players, of the fragile arrangement that kept the “national champions” national.

By recurring both to statistical data and to individual company crises as examples, I have tried to show how this process has taken place. The reader could appreciate the graduality with which this historical tendency has unfolded, beginning with the more traditional lower value-added sectors (e.g. basic chemistry, steelmaking and shipbuilding) and proceeding towards the higher value-added segments of production (e.g. automotive).

This structural competitiveness crisis was addressed through a general tendency to engage in more active forms of industrial policy, which has been featuring at least the last five years. Such trend has nevertheless taken different forms in different countries. In this respect, I have found it useful to draw a distinction between “strategic” industrial policy and “compensatory” industrial policy. While the former is constituted of financial and regulatory support in the context of larger plans for the competitive relaunch of a specific sector, the latter uses industrial policy at the advantage of certain sectors or players, but in a “blind” way, without a strategic medium-to-long term vision on how the sector should be relaunched.

I have tried to account for these differences in industrial policy reactions by comparing Italy and Germany, two manufacturing-intensive countries within the Eurozone which nevertheless displayed variation in their growth models and in the presence of a concentrated core of manufacturing sectors.

The argument I have advanced in this book is that sectoral concentration in manufacturing, proper of export-led growth models, is more conducive to sectoral and strategic forms of industrial policy. As I have shown, this happened at least through three mechanisms.

First, the presence of definite and established core sectors driving aggregate demand over time has provided policymakers with a cognitive framework setting established policy priorities which could easily survive political change. In this respect, the core sectors do not really need to “claim to represent the national interest” (Baccaro & Pontusson, 2016), since their importance is, to a large extent, taken for granted. As seen in the most recent crisis of automotive, the immediate consequences of sectoral crises have provided a further element of “urgency”, in that such crises come with important employment consequences making the problems of the sector politically salient and enter the realm of the “noisy politics”. I found particularly interesting that overall, my interviews did not reveal an especially strong “exportist ideology” (Nölke, 2021) to be a specific feature of the German context, compared to Italy. In both countries, promoting export competitiveness has been considered to be particularly important for economic growth.

Second, the push to export orientation of contemporary manufacturing in open economies, and the related need to internationalize, led to the creation of large international champions whose

competitiveness became to a certain extent the “proxy” of national competitiveness, easing policy coordination and providing clear actors of reference.

Third, the presence of corporatist institutions in established core sectors further promoted the orientation of policymakers towards these sectors and provided a tool for strategic engagement with them. From this angle, my findings resonate well with Di Carlo et al. (2024), who show how the German export sector captured segments of state policy by means of its role in corporatism arrangements.

I have also argued that the process of internationalization and scaling up of national champions has led to a silent and gradual loss of the structural power of the state vis-à-vis multinational corporations. Being less dependent on the domestic economy as a source of demand and as a productive location, transnational corporations are today in the heydays of their power vis-à-vis the national state. Eventually, I have argued that, as a consequence, the state would try to reinstate more coercive forms of industrial policy, in an attempt to constrain the exit options of corporations or at least to exert moral suasion.

The inherent contradiction in which contemporary nation states are trapped in is thus the need for internationalized and competitive national champions, while at the same time having to cope with the loss of policy power stemming from this internationalization process. Therefore, the persistent emphasis that governments put on the need of their national champions to become larger and internationalized (e.g. Babic, 2023) does not inherently contradict the weakness that results as an effect of this policy. As a result, capitalism moves one step further towards its disembedding tendency, whereby the market principle takes dominance over what Polanyi defined the *fabric of society* (Polanyi, 2001 [1944]: p. 37).

Taking stock of the findings: Italy and Germany vis-à-vis the competitiveness crisis

It is at this point that we can take stock of what is to be learned by observing commonalities and differences between the Italian and the German case studies.

Inevitably, Italy and Germany display remarkable similarities due to their strong manufacturing orientation. The energy crisis has shown this in a particularly evident way, since the two countries were among the top providers of energy subsidies in Europe, which is also explained by the high energy demand related to manufacturing (European Commission, 2023). However, similarities have also tended to strongly intertwine with differences, which resulted from a mix between structural economic factors and path dependencies.

To begin with, an important but non-trivial commonality between the two was the tendency to direct aid towards the incumbent sectors, once these sectors would stumble into a crisis.

Especially in the public debate, but also in large part of the academic literature, the Italian economic policy style has often been shamed for having been too focussed on the incumbent or traditional sectors,

as a sign of some form of backward-looking or inconsistent industrial policy (Burroni et al., 2021) or even as part of “capture-oriented” policies (Beramendi et al., 2015: p. 52). This study contests the idea that this may be an Italian or Mediterranean specificity. As a matter of fact, both Italy and Germany stepped in to support the sectors that were endangered by the changing conditions in global competition, once such crisis became structural.

In this respect, it could be argued that the German growth model was, for a long timespan, overwhelmingly self-driven. In “good times” there is little need to adopt strategic policies favouring incumbent sectors because such strategic tasks are delegated to national players. German corporatist institutions have helped conciliate the strategic repositioning of German firms with the demands of national stakeholders, leading to the processes of dualization observed in Rueda (2007) and Thelen (2014). This justifies the definition of Hassel and Palier (2021) of a growth strategy possibly pursued also by actors other than the state. From this angle, unions and national corporations did not pursue a growth strategy in the sense of macroeconomic planning, but they rather contributed to accommodate this outcome by striking a compromise that would ensure profits and the maintenance of part of the occupation and wage conditions.

Is this a path-breaking element for Germany? Literature has indeed shown that Germany was highly reluctant to come to the rescue of steelmaking during the steelmaking crisis in the second half of the 20th century. A likely explanation, which also resonates well with the findings, can be found in the brilliant observation by Zysman (1983), who observed that Germany did not step in to aid its traditional sectors presumably because there was a strong power base of “new” or innovative sectors, which allowed to shield politics from demands for subsidization. Germany is instead relatively weaker, at the global level, with respect to the “new” sectors, which do not stand out as potential drivers for economic growth.

However, even in good times, the energy policy of the early 2010s, and its tendency to reduce energy prices for large consumers can largely be interpreted as a form of intervention favouring the established sectors. Nevertheless, such policies were largely horizontal, in that they did not overtly target specific sectors, but they rather provided benefits to manufacturing, especially energy intensive manufacturing, as whole. As previously shown, the German interest and mobilization of financial resources for the “new sectors” (e.g. semiconductors, AI, EV batteries, etc.) accelerated as an effect of the realized tight connection between these sectors and the traditional ones.

The difference between Italy and Germany is thus one of timing, not of policy style, at least from the angle of the political privilege accorded to their traditional sectors of specialization. This difference in timing, in turn, is to be reconducted to the different sectoral specialization of the two countries to begin with, and especially the higher sectoral heterogeneity of Italy.

Having a look at the trade flows can provide further evidence of such differences. To begin with, let us compare Italy and Germany manufacturing trade balance vis-à-vis China and India.

It can be observed that the trade balance of the two countries vis-à-vis China has developed similarly over time, towards a general worsening tendency.

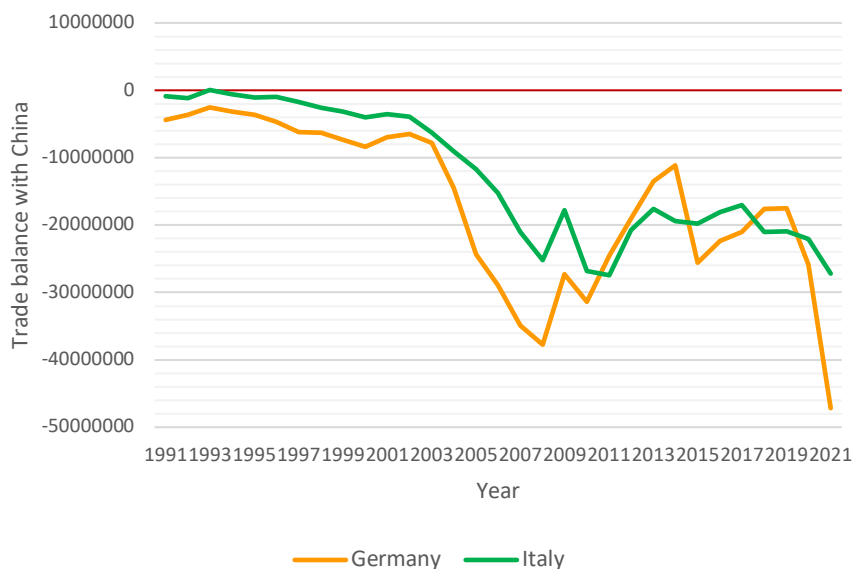


Figure 101 Manufacturing trade balance with China (mln, USD) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

When considering India, the manufacturing trade positions of the two countries diverge in important ways. While Italy's position had started worsening already in the 1990s, the German trade position dramatically improved for a certain time, then reverting back to a tendential decline.

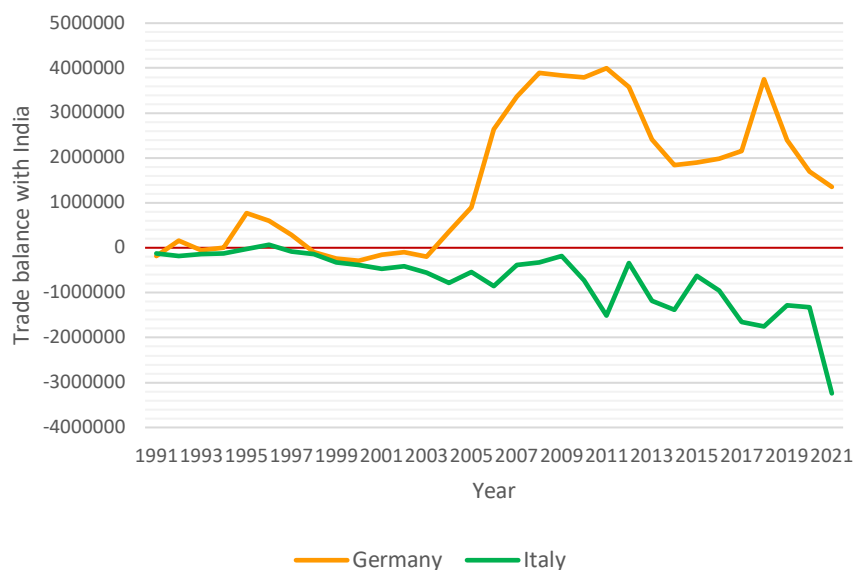


Figure 102 Manufacturing trade balance with India (mln, USD) (OECD Bil-Lateral Trade Database, 2024) (OECD, 2024a)

What accounted for Italy's worsening trade with India? What was Italy importing? Figure 103 shows that 52% of the imported value was accounted for by textiles, a traditional price sensitive sector which, as seen in Baccaro and Hadziabdic (forthcoming), considerably contributed negatively to Italian economic growth from a demand perspective.

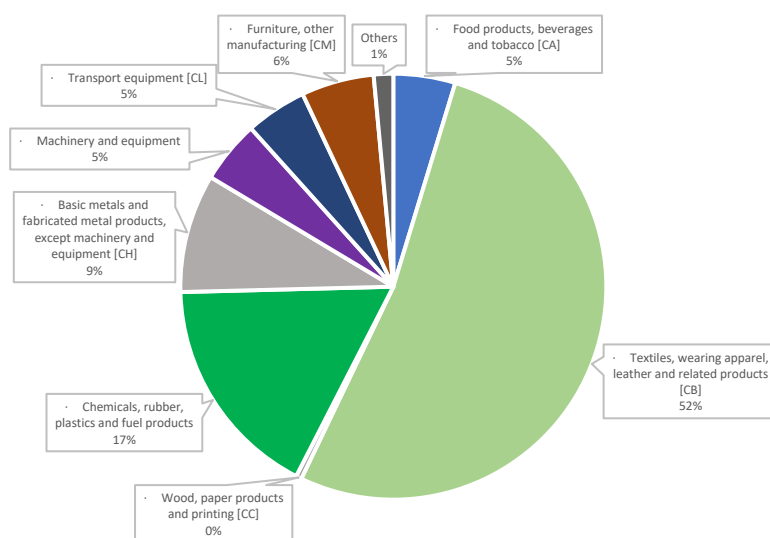


Figure 103 Manufacturing imports from India by Italy, composition (2001) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

It is furthermore interesting to notice that, in the Italian case, there has also been an upgrading in the import composition from India, which now spilled over to higher value-added sectors, including chemicals and machinery, where Italian industry used to hold stronger positions.

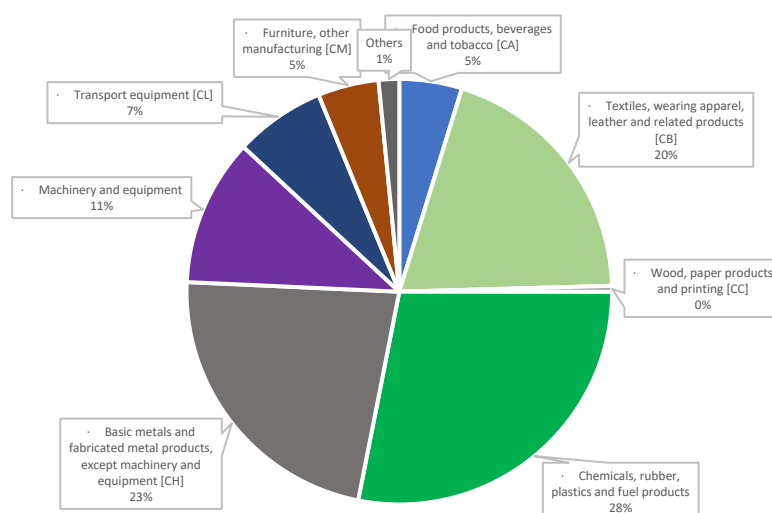


Figure 104 Manufacturing imports from India by Italy, composition (2019) (OECD Bi-Lateral Trade Database, 2024) (OECD, 2024a)

Therefore, the two countries had to address competitiveness concerns at different timepoints simply due to different sectoral specializations, which explains the earlier orientation of Italy towards a policy favouring the “incumbent sectors”.

Undergoing pressure from relatively similar causes, Italy and Germany displayed however a very different pattern of policy response. A primary reason for these differences is the possibility to discriminate between sectors of priority. As stated by Zysman (1983):

“To promote or shape industrial change, a government must be able to do three things:

- 1) have its own view of where industry should be going, which should emerge from its own definition of public purposes and its own interpretation of industry dynamics;*
- 2) mobilize and allocate resources in pursuit of the outcomes defined by its view;*
- 3) link domestic and foreign economic policy “(pp. 85-86)*

Far from being assumed, the capacity of governments to make up their mind regarding policy priorities is something to be investigated and explained.

I have argued in this dissertation that the overwhelming reason for the observed differences in policy paths should be reconducted to differences in the core sectors driving aggregate demand and specifically in the important role high-end manufacturing, especially automotive, has as demand absorber in the German context. The strong dependence on export competitive manufacturing *and* the presence of large transnational players accounting for a large share of employment made so that policymakers could see the survival of these sectors as an existential threat to the overall German economy. Furthermore, the

presence of large players allows to rely on a considerable supporting capacity for the resources and implementation of such plans. For instance, the automotive projects for digitalization mentioned in the German case overwhelmingly rely on large German producers who have resources and coordination capacity to implement them.

Conversely, in Italy the higher heterogeneity of manufacturing composition led to a lack of strategic focus of policymakers, ad-hoc vertical interventions in too-big-to-fail crisis situations, and to political fragility of sector-based strategic industrial policy projects. This holds especially when considering a kind of “strategic” industrial policy implying the development of considerable analytical capacities on the side of the state. Industrial policy could be vertical, but overwhelmingly in a “compensatory” way, rather than in a “strategic” one.

It is here that the story becomes more articulated and two elements of complexity have to be pointed out: the demand side of industrial policy and within-sector heterogeneity.

To begin with, there is a demand side of industrial policy, namely whether sectors advocate for it or not. This study has generally found a pattern to be valid in both countries: sectors that are more dependent on internal demand for their revenues tend to be more inclined to accept strategic styles of industrial policy compared to those that are mostly oriented towards foreign demand.

In Germany, steelmaking was one of the first sectors to have a proper strategic plan and to endorse the return of industrial policy, both with the NIS 2030 and the *Handlungskonzept Stahl*. In Italy, steelmakers increasingly moved towards a mindset of “system awareness”, whereby they would even advocate for state intervention to relaunch the steelmaking plant ILVA. However, Germany was considerably quicker in setting up a consistent plan to relaunch steel, while such project in Italy seems to be victim of political inconsistency and sometimes even state-industry conflict.

The construction sector also strongly advocated in favour of plans for infrastructure and public works which would provide the possibility for the industry to plan in the long term. In both countries, however, the construction sector was only seldomly addressed strategically. In Germany, this was valid even when the sector rose its contribution to GDP growth in the post-crisis period.

In Italy, a large part of the story has to do with the budget constraints following the 2011 crisis, which led to a dramatic depression of public investment in infrastructure both at the national and at the local level. Do budget constraints suffice to explain the lack of support to construction in Italy? In principle, the option was open to turn CDP into an institution with a substantial role in stimulating construction investment, on the model of the KfW of the early 2000s, or even more dramatically on the model of the US Fannie Mae and Freddie Mac. However, as seen, the CDP role in construction and infrastructure was more limited compared to its “industrial” role. Another important part of the explanation is that the post-crisis environment in Italian banking made so that banks were more reticent to engage in housing and construction finance, which means that the state would have to undertake a very large derisking

operation in order to properly stimulate the sector. Both in Germany and in Italy, the construction sector was addressed overwhelmingly as counter-cyclical instrument to cushion temporary recession. In Germany this was done through the KfW support to housing programs, while in Italy this happened through different means, and especially through the massive stimulus package of the *Superbonus 110* during the Conte government.

One could equally argue that strategic plans for the construction sector are something uncommon and that an “industrial” view is somehow “unnatural” to the sector. However, the historical experiences of the UK, US and Spain, show that governments can also think strategically of the construction sector, especially when their capacity to grow out of manufacturing is declining (Baccaro & Bulfone, 2022, Reisenbichler, 2022; Reisenbichler & Wiedemann, 2022).

Sectors more internationalized and oriented towards foreign markets were instead more cautious or completely opposed to a potential “return of industrial policy” meant as a set of government-coordinated strategies. This is true in both countries, although with some very important qualifications. In automotive, for instance, the VDA has generally been more hostile towards plans such as the Industrial Strategy 2030, especially in the aspects more strictly related to reshoring or direct forms of intervention. In Italy, ANFIA has gradually adopted more interventionist tones, going as far as advocating a strategic shareholding of CDP in Stellantis. I argued that this is due to the lack of national players with whom to coordinate industrial policy in Italy, which makes so that the national industrial stakeholders, especially small and medium suppliers, would turn to the largest historical player and only producer for maintaining the investment level. Moreover, the intervention in Stellantis is framed overwhelmingly as setting a level playing field between Italy and France in terms of control over the company, since France holds already a considerable state influence in it. Conversely, Germany has more players occupying different segments of the automotive market. Furthermore, it should not be forgotten that the state of Niedersachsen already holds a 12% stake in Volkswagen which, as seen, was a noticeable instrument of suasion in the past.

This does not imply that internationalized sectors did not demand industrial policy, since they extensively did. The industrial policy they demanded was however *compensatory* and envisioned the role of the state as subsidizing higher factor costs or higher investment costs. Depending on the industrial branch, this could be framed as going beyond budget constraints or as just prioritizing the “right” public expenditure. Still not eager to engage in a class conflict on wages, employers’ associations have tended to push the idea that social contributions should be lowered, which would mean a shift to a stronger budget-financed social security system. This carries an analogy with Italy, where employers’ associations have traditionally welcomed projects on reductions of taxes and social contributions on salaries. Both in the German and Italian case, therefore, there is a tendency for industry associations and unions to ask united to the state for “subsidizing social peace”, although such tendency is more marked in Germany (Streeck, 2003).

A further element of complexity comes from the features of the core sectors analysed. It seems that within-sector heterogeneity may be working as a significant factor in determining the orientation towards strategic forms of industrial policy. The German chemical sector, more hostile to industrial policy, has nevertheless one extremely large player, BASF, with strong investment power. General strategic plans on chemistry are nevertheless not to be seen, except at the local level on specific segments such as biofuels. Product heterogeneity may be playing a role in this. Like machinery, the chemical industry produces highly heterogeneous products, making it difficult to devise an encompassing working strategy.

The rebirth and varieties of forms of state finance

A further important commonality between the two countries is an overall rising tendency to mobilize state finance to obtain industrial policy goals. This is true for state finance considered in all of its forms, from energy subsidies, to scrapping incentives, investment grants and subsidized finance.

A politics of direct subsidization (nonrepayable subsidies) of industrial policy projects has been undertaken in Germany far more extensively than in Italy, due to several reasons. First, sectors like steelmaking in Germany are much more affected by the green transition than they are in Italy, due to their reliance on coal blasted furnaces, which makes the need for subsidization more urgent. Second, Italian budget constraints, especially after the return in force of the Stability and Growth Pact make so that the most recent policymaking has been featured by an attempt to cut anywhere possible, especially after the impact of the *Superbonus 110* on the public budget. Third, the scarcity of large players being able to adopt encompassing projects seems to have impacted the possibility to spend funding even when this was available in the Italian case, for instance in the use of the Next Generation EU funds. By means of their involvement, state-owned enterprises in Italy have been able to support the government in spending funds on specific projects, although this has been limited. In Germany, policies of subsidization of this kind were made more readily pursuable due to the presence of large players, as the projects on automotive and EV batteries have shown.

Demand-side incentives, such as scrapping bonuses for the automotive industry, have conversely become politically fragile and contested over the last period. This seems to be due to the fact that, despite being heavy on the public budget, such incentives have become less effective in guaranteeing the maintenance of a certain investment level. This scarce efficacy is likely to be due to the shrinkage in the importance of domestic markets in the overall market strategies of large international players. However, it is not to be excluded that, lacking more coercive forms of intervention, this form of subsidization may come back in vogue in the future.

A prominent alternative to non-repayable forms of subsidization has been constituted by lending at favourable conditions, especially by state-backed financial institutions. Public lending activities can provide advantages in two ways. On the one hand, the offered interest rates can be considerably lower compared to what could be obtained on the capital markets, as is especially the case for the KfW. On the other hand, banks often do not want to engage in either too big, too small, or too long financing projects because of risk or cost-related factors.

In this field, Italy and Germany present both differences and analogies. The main analogy has to do with the fact that in both countries state-backed lending has become increasingly instrumental to industrial policy goals. The German KfW especially strengthened its capacities considerably during the 2009 financial crisis, while CDP has undergone a relatively rapid process of buildup of its capacity to intervene since its privatization in the early 2000s.

Both CDP and the KfW have a segmented pattern of activity when it comes to lending.

On the one hand, there is the “general lending activity” which is most commonly not targeted at specific sectors or specific players. Here both banks tend to choose more project by project, rather than based on specific policy priorities. The KfW tends to concentrate the largest part of its corporate lending activity to strictly targeted programs with respect to policy goals (e.g. buildup of energy infrastructure, offshore wind), whereas CDP works according to broader objectives (e.g. investment, internationalization). The goal targeting of CDP happens mostly through the funds where it participates as an anchor investor, such as those for infrastructure and the several tech funds. This may be due to the path dependency regarding how such institutions were set up to begin with, which is extensively described in Mertens et al. (2021) and Bulfone and Di Carlo (2021). In fact, the nature of the KfW as an on-lending institution is likely to have influenced the more specific nature of the plafonds that are made available by the bank, in order to avoid excessive allocative discretion on the side of the banking system. Moreover, the KfW entered the 2000s specifically as a bank of the *Mittelstand*, with the KfW-IPEX being dedicated to larger customers and export finance. Conversely, CDP began with a lending mandate either for large or systemically relevant companies and gradually developed capacity to intervene in the SME scene.

On the other hand, there is an activity of selective lending, especially to larger players or for the realization of specific projects which is highly targeted and politically salient. For the KfW, such activity has taken place overwhelmingly through IPEX or through the special programs during the crisis. For CDP, some examples are the lending to ILVA, as well as the participation in financing projects of other state-owned enterprises. Moreover, CDP engages in targeting also through the participation to specific targeted funds, especially on infrastructure and tourism.

Furthermore, a critical difference lies in the extent to which the two banks can grant subsidized interest rates to their customers. In fact, CDP shares the credit rating of the Italian state (BBB), which is not considerably better than the rating of the largest commercial banks, which means the margin for interest

rate subsidization is much lower. Conversely, The triple-A rating of the German KfW is sensibly higher than the rating of the largest commercial banks, allowing the bank to borrow money on the financial market at extremely cheap conditions and to lend them at subsidized rates, through the banking system. This disadvantage of CDP when borrowing on capital markets may account for the fact that the bank still overwhelmingly relies on postal savings to finance its investment activity, although the cost and the balance sheet engineering used by CDP to “use” those savings are highly unclear even at the high levels of bank management (Interview 46).

Regarding the targeting of the lending activity, it is also considerable to notice, once again, that the post-financial crisis period was, in the Italian case, featured by a rising focus on internationalization, which went hand in hand with the collapse of the domestic market in Italy and to the need to look for growth in foreign markets. This creates an interesting parallel between the shift of the Italian growth model from domestic demand-led to very export-led (Baccaro & Hadziabdic, 2023). In this respect, it is especially interesting that in the Italian interviews it was several times pointed out that export is very important, in light of the fact that the exporting sectors were those to have better resisted during both the financial crisis and the Covid crisis.

Part of the reason underlying this rising use of state finance in both countries is a strong tendency to privilege off-balance sheet instruments of industrial policy (Endrejat, 2024). This has been particularly the case in Italy, where the budget-financed public expenditure for industrial policy goals saw a dramatic drop in the early 2010s. In fact, Italy strengthened not only off-balance sheet instruments, but also balance sheet-sparing instruments to an extent unseen before, first through the *Fondo di Garanzia*, then with a revolutionary expansion of the functions of the export credit agency SACE to provide guarantees to SMEs in the internal market.

Furthermore, a very considerable part of the lending activity undertaken by public banks in both countries is directly guaranteed by the state, which implies that the state has to directly reimburse public banks in case of losses, making this lending even more of a direct contingent liability for the state. In particular, the German KfW has consistently tried to maintain a very low risk profile by engaging in a process of continuous bargain over the guaranteed amount by the state.

The Italian and German shareholding states compared

A specific commentary should be dedicated to the role of state ownership in industrial companies in this renewed politics of state finance. In both Italy and Germany, the tendency has indeed been to a growing use of state direct intervention in both countries, although in different ways and with different goals.

In Germany, forms of temporary or non-temporary state ownership have been used in order to undertake operations that could have been previously undertaken with the informal instruments of the Deutschland AG. While the Hertz50 acquisition was aimed at keeping a strategic asset in national hands, the Uniper and Sefer were aimed at rescuing bankrupting companies holding critical (gas) infrastructure. It is to be seen what the destiny of these “unwanted children” of the crisis-driven nationalizations will be, although there seems to be hints to the fact that governments may be using the situation in order to promote a faster buildup of the hydrogen infrastructure. Considering that the use of instruments of state direct intervention in Germany is a highly controversial matter, the political survival of this state-led strategy of infrastructure buildup is an open question. At the same time, the maintenance of a remarkable share in Volkswagen allows the state of Niedersachsen and local stakeholders to have a further instrument of control and suasion useful to counterbalance the disruptive effects of the internationalization process, thereby contrasting the strong drive to disembedding. These cases, and the innovative proposals of a *Beteiligungsfazität* by the former finance minister Altmaier, have made clear that the German state intervened because the maintenance of national industrial assets could not be granted anymore by a solid coalition of actors as it was in the past with the Deutschland AG. On the one hand, there has been the tendency of large conglomerates to interact more directly with larger companies, but on the other hand these companies have fled the acquisition of systemic responsibilities, as the KUKA case most obviously shows (Interview 18).

As a general observation, the German form of shareholder state seems to remain, to this day, of a strictly temporary type and with a short-term orientation. As previously explained, this is also due to the fact that there is a certain industry opposition to having the ministries supervising their internal business (Interview 42). Moreover, state capacity in this field is still very limited for wider interventions to take place. The case of Hertz50 seems to be unique in this respect, in that the government did not re-sell the company even when the option was viable.

In the Italian case, state shareholding has acquired a very different form. State-owned enterprises have been involved in several industrial policy projects, although in a more heterogeneous and generally different way than in Germany.

To begin with, CDP has played a central role in several consolidation and expansion projects aimed at creating national and international players, as shown by cases like WeBuild, SIA-NEXI and Bonifiche Ferraresi. In such instances, the state intervened directly in order to create solid national players able to stand international competition, thereby addressing the problem of the relatively smaller size of even large Italian companies in comparison to their foreign competitors. This process was further aided by the participation of CDP to further funds targeting especially medium enterprises and aimed at favouring processes of aggregation.

Second, it was shown how state-owned enterprises, especially those participated by CDP, have started to develop some synergies and engage in joint projects across a number of fields also independently of

policy orientations coming from the political level. The fact that the system of state-owned enterprises can move a considerable amount of resources, makes so that it can engage in forms of “privatized industrial policy”, exploiting the synergies of being all under the control of CDP.

This leads to considerations regarding whether a strategic centre for industrial policy decision-making is developing in Italy, which is not only mandated by political logics, but also, and perhaps overall, responds to its own plans. Interview and documentary material does indeed show that the logic of certain investment operations by SOEs can be mixed. For instance, the involvement of CDP in the WeBuild case was much more a political project than, for instance Rocco Forte Hotels. I will explore this aspect more in depth in the next section.

The nature of the Italian shareholder state is nevertheless widely contested and strongly dependent on the orientation of the state manager. What is particularly relevant to notice is that the shift to a more market liberal management at the head of CDP did not come with a complete relinquishment of the instrument of equity intervention, but rather with a different goal and orientation of it. The difference that appears is in terms of medium-to-long term willingness to plan and intervene. While the Scannapieco administration is more oriented towards very limited equity interventions, to be dismissed once the goal is achieved (e.g. to support a process of expansion), the Palermo administration had a more long-term orientation and saw the bank as a centre or strategic long-term planning responsive to political-developmental goals.

The political economy of disembeddedness and the challenge of state capacity

A major part of the argument of this book is that that the current competitive crisis has accelerated an ongoing process of disembeddedment. The pressure to internationalize both in terms of new export markets and in terms of foreign investment is a common tendency featuring both Italy and Germany in the period analysed. Especially in Italy, the common grounding of these internationalization attempts was either falling or insufficient internal demand.

This trend has involved not only small companies, but especially the medium-large ones who had the expertise and the resources to exploit the opportunities for internationalization.

For large corporations, this has meant a common tendency to use the “exit” options and be uncooperative with governments. This holds true for in both of the cases studied. In this respect, sectoral differences can enlighten us regarding different patterns with which governments have tried to cope with this problem.

Taking the case of automotive, Italy has seen a process of particularly extreme disembeddedment of FIAT from its domestic economy. The company pushed for a strong internationalization strategy which cut its dependence on the country considerably. Even facing calls from national stakeholders, the Italian

state ruled out the possibility of a strategic shareholding in Stellantis, without even properly motivating the exclusion of this option. The present government engaged in extensive bargaining, first by making available demand incentives, then withdrawing them once the policy goal to ensure productive volumes failed. The Italian state seems to be in a phase where it does not have enough capacity to deploy coercive instruments, while demand instruments have become ineffective. The more active reaction prompted by this situation is to look for a “second producer”, although this still remains in the realm of wishful thinking.

In Germany, the situation is different due to the fact that there are more producers occupying different market segments. The outcome however is the same and the German government has had relatively little power to influence the corporate world. Volkswagen is a case of mixed success, not due to government intervention, but rather due to the specific governance arrangement of Volkswagen, where the important role of the shareholder Niedersachsen and of the company-level corporatist structures is non-secondary.

In chemistry, the Italian role as a shareholder has been decisive in determining the outcome of maintaining domestic occupational levels even in a sector under strong market pressure like basic chemistry, although nowadays a certain extent of bargained restructuring seems unavoidable. Conversely, in the German case, BASF remained relatively unhindered in its policy of downsizing domestic employment while rising investment in China.

Clearly, we are considering here very different cases, but a certain pattern emerges whereby forms of ownership power grant better ability to retain some commitment of corporate actors to the domestic economy, which Bulfone (2020a) found to be a feature of the Italian case in particular.

This may not indeed be surprising in the Italian case, but it instead figures as especially interesting in the German one. The intervention of the German government in Hertz50 and the failure to broker an alliance of domestic corporate players in the KUKA case are especially emblematic of the fact that there is very little space for commitment in the German corporate world. This strides considerably with the events portrayed by Weiss (2021) regarding the times of Deutschland AG, when the government could go as far as privatizing a strategic military-connected industry because of the high degree of trust ensured by informal relationships.

The demise of the Deutschland AG is nothing new and it has extensively been discussed in the literature (Streeck & Höpner, 2003). The element of novelty is however that the German state has displayed only recently some signs of responsiveness to the loss of these coordinating devices. I have shown here that this has been due to the ensuing, to say it with Gourevitch (1986) of “hard times”, whereby necessity to act has made governments realize the relatively scarce capacity they have in involving corporate actors. In this respect, I share the view of Naqvi et al. (2018), according to which the KfW has been used to fill the gaps left by the end of Deutschland AG.

The existing literature offers a plethora of explanations of rising state intervention, which can relate to a higher or lower extent, relate to the story I have narrated here.

Geoeconomic explanations relate to a good extent to the developments shown here. In the logic espoused by Moraes and Wigell (2022), we may see these attempts of the state to take back control as “aggressive strategies” to enforce dependencies on corporations who instead want to draw the boundaries of their independence.

I see the differences of my Polanyian approach from the geoeconomic one as especially one of emphasis. The geoeconomic literature is highly heterogeneous, but what it tends to emphasize is a view of state and non-state actors as strategists somehow monitoring each other’s moves and strategically organizing responses. The emphasis I want to put here is on the fact that the broader socio-political context in which the state is embedded and that permeates the state, exerts an inherent pressure motivating this taking back control. To simplify: I deem the bottom-up dynamics as playing a much more important role than the simple strategic behaviour of actors at the higher level. I have tried to show in the book how indeed in both Italy and Germany societal pressures for “hard” forms of re-embedding would systematically arise once a crisis situation would create material contradiction leading one of the sides, national stakeholders versus corporations, to lose something.

The geoeconomic explanation, however, carries a higher leverage for all those cases of intervention where the aggregate economic impact is minimum, but which carry high strategic relevance, as the case of Hertz50 has shown.

Economic patriotism (Clift & Woll, 2012) also displays elements of overlap, in that this approach draws the political consequences of the contemporary pressure between globalized capitalism and domestic constituencies, which sets the framework where governments intervene. However, the process of disembedding that I have shown has made the distinction between insiders and outsiders wrong in terms. Governments still want to support their (inter)national champions, but the tendency has also been for these national champions to de-nationalize.

The Italian case is perhaps the best and most dramatic expression of this tendency. In fact, the careful observer may have been able to appreciate the changing angle in relation to the way the Italian state has interacted with the main automotive producer. Previously a national champion whose interest was identified with the national interest, governments have started to see first FCA-FIAT and then Stellantis as players with whom they have to bargain because of lack of better options.

An important aspect related to the process of disembedding is however that it contributes to weaken the capacity of the state in a period in which states have relatively less capacity to begin with.

In the literature, state capacity in industrial policy has often been identified with concepts akin to “embedded autonomy”, namely the capacity of the state to pursue policy goals through its connections to society, without being captured by particularistic interests in the process (Evans, 1995).

I adopt here rather a multidimensional idea of state capacity, inspired by Oellerich (forthcoming), who invites to think as “state capacity”, “policy capacity” and “administrative capacity” as distinguished dimensions of the overall capacity. The case studies I observed have diffused gaps in several of these areas. For instance, the disembedding of large corporate players has influenced “state capacity”, in that governments struggle to obtain the necessary cooperation of private business for policy goals.

Furthermore, the atrophy process of the state machine during the era of the “consolidation state” (Streeck, 2014) has led to a considerable loss in administrative and planning capacity. Here the stories of Italy and Germany acquire different shades. In Italy, the privatization of the IRI system has led to a sharp drop in the capacity of industrial know-how of the state, which is gradually being re-acquired by CDP. In Germany, connecting the dots with the existing literature would lead to conclude that such capacity to intervene was weak to begin with, and that the state is “learning” now to be successful in its planning strategies (Katzenstein, 1989).

The state machine is thus in a process of slow capacity building which nevertheless strides considerably with the speed at which change happening at this specific phase of capitalism. The process of “learning” whereby states became acquainted with intervening in the economy, described in so much detail by Shonfield (1969), is a luxury for the periods of growth. This is true both for Italy and for Germany.

This weakness of the state has reinforced the role of quasi-public institutions, like the KfW or CDP as actors that may carry their own strategic vision and the financial firepower to enact it. This is more valid in the case of CDP, since it is more than a bank, but a real industrial holding of state-owned enterprises which, as seen have also displayed an interesting capacity to coordinate on specific issues.

Therefore, at least in this phase, state-backed financial institutions and state-owned enterprises work as considerable capacity-enhancers. They carry industrial and financial expertise allowing governments to abate fundamental information asymmetries. In the Italian case, state-owned enterprises are also among the largest corporations, which has placed them in a good position to deploy a considerable amount of firepower and to act as agenda-advocates in industrial policy.

Eventually, a careful reading will allow to appreciate how a bifurcation has occurred in the strategies undertaken by state actors facing limited capacity.

On the one hand, there is the capitulation to the idea that governments are doomed, at least for some time, to disburse subsidies. This resonates well with the idea of low state capacity as conducive to forms of corporate welfare with “no strings attached” (Bulfone et al., 2023). It factually also emerged often in

the interviews that for large corporate players lending instruments are less persuasive *because “[t]hey simply want to get money that they do not have to pay back”* (Interview 05).

Furthermore, an overview to the financial aspects of how even lending programs have been set up leads to observe that these weak states have resorted to guarantees in an incredibly extensive manner. In Italy, this was motivated by the strong budget crisis, and in Germany by the attempts to circumvent the *Schuldenbremse*. In both cases, guarantees, which are eventually contingent liabilities, have become the favourite instrument of intervention and also indirect forms of subsidization of the banking system, since such guarantees are valid as “sovereign” are zero-weight assets for regulatory purposes. In this respect, my research strongly corroborates the arguments advanced by Gabor (2023) on the rising relevance of de-risking states, both emerging from low state capacity and from a higher structural power of finance.

On the other hand, I have also shown how the state has occasionally resorted to strong forms of ownership power to compensate for this lack of capacity in involving systemically relevant corporate players. However, initiatives of “hostile” takeovers of “noncompliant” players do not seem to be in the agenda, as they would also require stronger capacity.

Industrial policy as part of growth strategies?

In the present work, I have tried to connect theories of comparative capitalism with theories of industrial policy, by showing how growth models can aid in the explanation of different industrial policy approaches. The micro-juncture allowing this connection is a concept of “growth strategy” (Baccaro et al., 2022), whereby state and non-state actors should share some common vision on how the economy works, with the shared purpose to promote growth.

This leads to a well-known problem of a substantial difference between the unitary nature of the country economic system, which is the level at which growth is measured, and the multiplicity of actors who can gain or lose from such strategies. Scharpf (1991) effectively described the problem, by arguing that *“[i]n the area of economic policy such a pattern (a strategy, edit) can be created only if the decisions of several or many participants are effectively coordinated (...) various economic policy makers are likely to pursue their own different economic and institutional interests (....) Thus, their participation in concerted strategies is problematic in principle”* (Scharpf, 1991: p. 12).

The findings of my study are, in this respect, highly relevant in how we see the locus, or loci, where strategies are elaborated.

To begin with, it is problematic per se to assume that all actors try to pursue or be part of a strategy. The whole discussion on disembeddedness pursued in this book leads to conclude that right the actors that

are often thought as the drivers of certain strategic projects, may be those that are the least engaged in this strategic effort. To be sure, large transnational corporations still engage in extensive bargaining with governments. However, their dependence on the home economy, both as a market and a production location, has loosened to an extent that it may not be worth to engage in the power games necessary to exert voice in the first place.

If we buy into this reading of “advanced disembeddedness”, then it would result that large corporate actors may be participating in a strategy, but just by means of their structural power. In sum, politicians will try to do so that large corporations will keep finding it reasonable to maintain the investment levels in the home economy.

In general, a strategy thought of in macroeconomic terms should thus be relatable to actors who have good reasons to identify their interests as defensible only by means national-level actions or measures since, it will be reminded, the unit of analysis of a growth strategy is the national economy.

Business associations and unions can certainly think strategically in this respect, in that they tend to represent not only large corporations but also smaller and less mobile corporate actors. However, the strategic capacity of these organizations is conditional on successful coordination with the state, without which it would be hardly thinkable to enact strategies. In fact, the recent history of Germany, featured by the erosion and the loss of mobilizational power of its traditional organizations of interest representation (Streeck, 2009), makes it unlikely that such organizations will have the effective power to “privately” mobilize a critical volume of resources to enact a proper economic strategy. Even German trade unions, traditionally proud defenders of the collective bargaining autonomy, had eventually to accept their reliance on the state and changed their in principle contrary position against the introduction of a statutory minimum wage (Mabbett, 2016).

This leads to another contradiction, highlighted by this study, between the “need to act” and the relative weakness of contemporary states in coordinating and enacting their strategies. The situation seems thus to be one of relatively weak states with relatively weak social partners (Streeck, 2003). Clearly, what written implies that I am arguing from the point of view of that sees the state as the strongest among the weakest.

As above mentioned, the state machine is developing, although slowly, its own capacity, which often happens through the further empowerment of quasi-public actors.

If the strategic capacity of the Italian SOEs will keep developing, which is far from granted, we may well see a situation of segmented growth strategies between politics and SOEs, who are also among the largest corporate actors in Italy. Politicians would thus rely for implementing their plans on actors whose strategic capacity is too advanced to be kept under control. This is a stretch, but a useful one to show the implications of a further development of capacity outside of the traditional bureaucracy.

In the Italian case, it would also not be an unlikely guess, since a rich amount of historical work has shown the considerable role that developmentalist-minded state managers, most importantly Enrico Mattei, played in the history of the country as true strategic thinkers, and the relative autonomy of IRI managers in developing own projects (Bianchi, 2002; Shonfield, 1969).

Beyond the capacity to enact a strategy, it is worth to recall Zysman (1983) to remind that the idea that actors can make their own mind on where to channel resources is not for granted, but rather a matter of investigation. In this dissertation I have tried to show that “hard” macroeconomic factors (demand drivers, core sectors) do exert an important pressure to opt for certain strategic choices in industrial policy.

Were the industrial policy paths that I observed in these two countries part of a strategy? If so, who was pursuing it?

In the German case, the strategic style of industrial policy that we observed decisively points to the idea that a strategy is in place, which aims at fostering the international competitiveness of the traditional sector in order for them acquire market shares. What is more, this includes compensatory measures to abate factor costs of production and thus promote not only quality-based competitiveness but also price competitiveness.

The devising of these plans undoubtedly relies on the corporatist tradition of German economic governance, and social partners are highly involved in such strategies especially as a way to cope with a limited state capacity. In this sense, there may some captive dynamics whereby social partners may use these information asymmetries to push the state for further subsidization (Di Carlo et al., 2024). It is however important to stress an important point, namely that the Industrial Strategy 2030, with which the strategy of the last government was in substantial continuity, was crafted entirely internally to the Ministry of the Economy. What explains the subsequent watering down of the strategy is business opposition rather than captive behaviour by corporatist institutions.

This nonetheless, what I find is a substantial alignment in the views of the actors that are responsible for industrial policy at least on the shared goal of relaunching certain sectors, which is not ideological, but rather very practical. In a way, these sectors are considered to be “too big to fail” for the sheer amount of resources and job places that their collapse would come with. In this sense, a “hard” economic-structural component facilitates convergence of views.

In the Italian case, many sectors are “important” or “strategic”, which can be quickly turned into the old motto: everyone is useful, no one is irreplaceable”. What is more, no sector in Italy has such an established and strong international position to work as a plausible “good horse to bet on” for forms of targeted support. The only exception may be shipbuilding, whose aggregate impact on the economy is however relatively mild compared to other sectors. Even high-tech sectors have lower potential to develop because of the generally lower technological content of domestic manufacturing (Interview 63).

This uncertainty opens room for discretion and for multi-level actor strategies within the political machine itself. SOEs have considerable financial firepower which they can employ in development plans that are most closely related to their main business areas, as the example of the partnerships on hydrogen especially shows. The sectors where they are employed, however, have systemic relevance in the aggregate, but not individually, meaning that the “hard” element of demand-driven constrain is missing, which is what would lead to widely shared views on the *need* to support these sectors.

Starting from these observations, I consider highly relevant to investigate industrial policy strategies as part of growth strategies and to do so with an open eye to the alignment of views between different actors who occupy the crucial nodes to implement a growth strategy. Such actors change in every economic context and the requirements for their persuasion also change.

In this respect, further research may investigate on which actors governments rely in order to fill the gaps in their capacity to enact strategies.

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