SciencesPo
SCHOOL OF PUBLIC AFFAIRS

PUBLIC POLICY MASTER THESIS

April 2024

Trade unions' positions and roles for a just transition

The case of the automotive industry in France, Germany, and Italy

Letizia Bombardieri

Master's Thesis supervised by Bruno Palier

Second member of the Jury: Matteo Mandelli

Master in Public Policy
Policy Stream Social Policy and Social Innovation

Table of Contents

Why should you read this research?

At the very core of this research, there is the commitment to a just transition. We need to achieve carbon neutrality and we must and can do it without making workers bearing the costs of the transition. The massive restructuring of the industry, entailed by decarbonisation, means that the economic security of industrial workers and their family is changing. And this is scary. To avoid a social backlash against climate policies or the creation of new social inequalities, we need to ensure that the green transition is not happening only at the expenses of one part of the population, but in a fair way. For this to happen, workers need to be part of the design and management of the transition. Only through their active and serious inclusion, workers can feel that they are not at the mercy of someone else's decisions, but that they have a voice in their present and future.

As their representatives, trade unions have the responsibility to voice their claims and advocate for their protection and empowerment through the green transition. It is indeed central to investigate what trade unions envision for the future of the industry, whether they support or oppose the green transition, and how nature-labour alliances can be created. At the same time, ensuring a just transition is not only a matter of what trade unions want, but also of power: can trade unions influence the industrial strategy? This question opens the door to the discussion of trade unions' role in their respective national economies and the type of industrial relations which characterises different countries. Are existing industrial relation systems equipped for ensuring a just transition?

This research starts from those questions and focuses on the specific sector of the automotive industry in France, Germany, and Italy. Those three countries are characterized by three different systems of industrial relations and are all going through a deep process of change due to the decarbonisation of their industry. By analysing trade unions' positions, we notice the increasing commitment of trade unions to the climate challenge: they recognise and support the need of meeting the environmental goals. By comparing the extent to which their positions are included in the industrial policy, we evaluate how industrial relations and the power they have in the national economy influence the possibility of achieving a just transition. We believe that understanding whether and how trade unions are heard is necessary for designing measures and policies which ensure a just transition, a real one.

Whether you are an activist, a researcher, a policymaker or a trade unionist, we hope that this research will give you a hint on what is happening in trade unions' minds and in industrial policies to understand the problems and opportunities of the system we live in. Moreover, we hope to give you the willingness of continuing this research on what a just transition is and how we can work together to achieve it. This is the reason why we decided to embark on this research, and *I hope someday you'll join us. And the world will be as one*.

Introduction

Climate change and the green transition are becoming more and more present in political agendas at both the national and international levels. Decarbonising the economy means that polluting sectors will be phased out or massively transformed. One of them is the automotive industry which represents a cornerstone of the European economy and workforce representing 7% of the GDP (European Commission, 2024) and 7.8% of the total EU employment (ACEA, 2023). The industry is positioned at the crossroads of several challenges: decarbonisation, digital transformation, and global competition. In the particular case of decarbonisation, the European Union passed in September 2023 the ban on internal combustion engine (ICE) vehicles (with the exception of fossil-free-fuels such as e-fuels and biofuels) which will prohibit the sale of fossil-fuelled cars from 2035. Given the highly polluting nature of road transport in Europe, the phasing out of fossil fuels and the adoption of new technological and behavioural transport patterns are becoming key.

Those changes represent a massive restructuring of the car industry with important implications for the workers employed in the sector and society as a whole. First, producing fewer cars and electric vehicles means fewer workers and new mobility patterns such as shared and connected mobility imply a rethinking of traditional business models of original equipment manufacturers (OEMs). While new sectors will emerge, some traditional jobs will disappear, creating the need for new skills, training programmes and social security systems to support workers through the transition. Second, the transition to a sustainable transport system is not just about technological change: it's about redesigning mobility as a whole, making it accessible and affordable for all.

Both the goals and the process of the green transition need strong political and societal support. “The key to the success of this fundamental change, which will affect the everyday lives of millions of people, is the development of broad social acceptance and support for the change” (Lehndorff, 2024, p. 34). Events such as the Yellow Vest Movement in 2018 and the farmers’ protests in 2024 demonstrate the social backlash against top-down climate policies. For a green transition to happen, policymakers must acknowledge green policies to exacerbate existing inequalities and address them in the design of the policy. In the case of the automotive industry, climate policies take the form of industrial policies at both the national and EU levels. While in the past vertical industrial policies have been avoided in the name of the free market, nowadays climate change and the urgency of decarbonising the economy are pushing for targeted industrial transition strategies to provide the sector with the necessary regulatory and financial tools.

For those strategies to be just, the International Labour Organisation (ILO) provides an international framework for a Just Transition. According to those guidelines, “the four pillars of the Decent Work Agenda – social dialogue, social protection, rights at work and employment – are indispensable building blocks of sustainable development and must be at the center of policies for strong, sustainable and inclusive growth and development.” (ILO, 2016, p. 4). More specifically, “governments, in consultation with social partners, should set goals for the continuous improvement in the social, economic and environmental sustainability of the sectors

and design sectoral policies and programmes in line with the specific conditions of each sector and the types and sizes of enterprises operating in it" (ILO, 2016, p. 11). According to those guidelines, the social partners, namely trade unions and employers, are expected to be actively involved in the decision-making process on industrial strategies, as it is through their participation that the voices concerned can be heard. Social dialogue is used as a kind of proxy for just transition, and this is what we want to test in our research in the specific case of national industrial strategies for the automotive sector.

Trade unions, as political actors, are the protagonists of this paper, given their mandate to represent the voice of workers and advocate for their rights. As mentioned above, the massive restructuring of the automotive industry means a reconfiguration of the labour market with both positive and negative implications for workers. As workers' representatives at national, sectoral and company levels, trade unions have the responsibility of promoting policies that aim to leave no worker behind. For example, they call for clear industrial strategies, retraining programmes and social security schemes, but also for a paired governance at the national level, co-determination rights in the company boardroom and social conditionalities in public funding. In addition, it is particularly important to look at trade unions' visions for the future of the automotive industry in order to understand how environmental and labour goals can be achieved together. Because of their priority to protect jobs, trade unions could be seen as opposing the green transition in the name of job protection. At the same time, the academic literature and the analysis of trade unions' positions show different understandings of how the dilemma between jobs and the environment can be overcome through a just transition.

Having established the importance of social dialogue and the role of trade unions for a just transition in the automotive industry, this research aims to examine whether trade unions are involved in the planning of the greening of the automotive industry and to what extent their positions are reflected in the national strategy. Firstly, we analyse the role played by trade unions in the national economy and the existence of institutions that allow trade union participation in the design of industrial policy. Second, we describe to what extent their positions are included in the national strategy. The overarching research question is the following:

RQ: Are trade unions' positions towards the decarbonisation of the automotive industry included in the national industrial strategy?

To answer this question, we decided to compare three countries, namely France, Germany and Italy. The choice of these countries is based on the different institutional settings that characterise their industrial relations, in particular the production regime, the degree of industrial democracy, i.e. the power of trade unions at industry and company level, the role of the social partners in public policy and the governance of the automotive industry. In Germany, trade unions are strong at industry and company level and have institutionalised channels through which they can influence the decision-making process. In the specific case of the automotive industry, they participate in the Alliance for the Future of Industry, which guides the national industrial strategy and is characterised by a paired governance. In contrast, Italian

and French unions are losing ground at industry and company level and are less and less involved in the decision-making process. The Platform Filère Automobile and the Tavolo Automotive are the social dialogue initiatives for the management of the industry, but both are characterized by unpaired governance, with unions only having a consultative role. Consequently, *we expect IG Metall's positions to be included in the national strategy (H1). In contrast, we expect the French (CFT Métallurgie, CFDT Métallurgie, FO Métaux) and Italian (FIOM, FIM, UILM) trade unions' positions not to be included in the national strategy (H2).* As mentioned above, the involvement of trade unions is at the heart of the design and implementation of a just transition for the automotive sector. Indeed, it is crucial to check whether their voices are heard at the national level where decarbonisation targets and processes are decided. Table 1 resumes the main features of countries' industrial relations and our hypotheses.

Table 1: Relevant dimensions of trade unions' role in the national economy and hypotheses

	Germany	**France**	**Italy**
Production regime	Coordinated Market Economy	Statist Market Economy	Statist Market Economy
Industrial democracy	Strong	Weak	Weak
Role of social partners in policymaking	Institutionalized	Irregular/ politicized	Irregular/ politicized
Governance of the automotive industry at the national level	Alliance for the Future of Industry Paired governance	Platform Filère Automobile (PFA) Unpaired governance	Tavolo Automotive Unpaired governance
Trade unions in the automotive industry	IG Metall	CGT Métallurgie CFDT Métallurgie FO Métaux	FIOM-CGIL FIM-CISL UILM
Expected inclusion	Yes	No	No

A closer look at the outcome of these social dialogue initiatives led us to focus on the nature of the industrial policies promoted by the government and to compare them with trade unions' positions. Having a voice in the policy-making process does not necessarily mean that trade unions' positions are reflected in the national strategy. Even when consulted, trade union visions may only be partially included or their participation in social dialogue initiatives may influence their positions. Conversely, unions may not be actively involved in the decision-making process, but still be aligned with the industrial policy for other economic and political reasons. In mapping and comparing trade unions' positions and industrial policies, we mobilise

a typology of just transitions. As the literature on just transitions informs us, there are very different understandings of just transitions, from status quo approaches to transformative approaches (Just Transition Research Collaborative, 2018). We develop a theoretical framework to classify their strategy along two dimensions: a) Positions towards the green transition, i.e. positions towards the phasing out of fossil-fuels from the car industry and strategy of how to achieve environmental goals and b) Typology of just transition, i.e. the nature of decision-making processes at national and company level and the measures needed to ensure worker protection. Table 2 resumes trade unions' positions and national industrial strategies, according to those two dimensions.

Table 2: Trade unions' positions and national strategies for the decarbonisation of the automotive industry

Type of just transition	**Transformative approach**					CGT Métallurgie
	Structural approach					IG Metall CFDT Métallurgie
	Managerial approach		German industrial strategy UILM FIM-CISL		FO Métaux	FIOM-CGIL
	Status quo approach	Italian government strategy			French industrial strategy	
		Opposition	**Hedging**	**Low support**	**Medium support**	**High support**
		Position towards the green transition				

Industrial policy differs from country to country. Germany's national strategy aims to support innovation and modernisation in the automotive sector to maintain the country's strong position

in the European automotive market. At the same time, despite its commitment to decarbonisation and digitalisation of the value chain, the government is reducing the financial instruments to support the transition. French industrial policy is focused on increasing car production in France and supporting suppliers and is currently shifting towards the production of lighter and cheaper cars. The state is relegated to creating the right environment for French car companies (Renault and Peugeot S.A.) to produce in the country, supporting the purchase of electric cars through subsidies and providing retraining programmes for the workforce. The Italian situation is characterised by the lack of a clear industrial strategy, with the government trying to "force" Fiat Chrysler Automobiles (now Stellantis) to increase car production in Italian plants. At the same time, the polarisation between the state and the company puts the future of the workforce at risk. In terms of type of just transition, while in Germany the industrial strategy supports the German model of cooperation between trade unions and companies, in Italy and France the industrial strategy lacks the involvement of trade unions at national and company level. Finally, reskilling programmes are present in the German and French strategies, but not in the Italian one.

On the other hand, the analysis of trade unions' statements reveals a wide variety of proposals and positions. With regard to the position on the green transition, some unions (IG Metall, CGT Métallurgie, CFDT Métallurgie, FIOM-CGIL) are actively engaging with the decarbonisation of the industry, pointing to the need to reduce car traffic and rethink mobility as a whole. Other unions (FO Métaux, FIM, UILM) are comparatively less supportive of the transition, but still agree on the need to decarbonise the sector. Both French and Italian unions are very concerned about the current decline of the car industry in their country and are demanding the country's reindustrialisation through the implementation of strong location conditionalities for public funds. In addition, all French unions and FIOM-CGIL share the objective of changing the car model from heavy and expensive (premium) vehicles to light and cheaper (mass market) electric vehicles. In terms of the type of just transition, IG Metall is calling for strong social conditionality on public funding and an extension of co-determination rights at company level. French unions are calling on the state to democratize existing social dialogue initiatives such as the PFA. More radically, the CGT Métallurgie is advocating for a collective mobilization to transform the sector. Finally, Italian unions are calling for their involvement in the development of a clear industrial strategy.

The comparison between trade unions' positions and industrial strategies leads to the findings summarized in Table 3. In Germany, there is a growing gap between IG Metall and the German government in terms of decarbonisation strategy and financial support. Looking at the strategy, we found that, while IG Metall promotes a mobility transition with a reduced role for the car, this is not translated into concrete actions in the industrial strategy. This led us to think that existing social dialogue initiatives may narrow down trade unions' positions towards less transformative approaches to the green transition. In France, trade union strategies remain marginal, except for the proposal to switch to lighter and cheaper cars. The shift to mass-market car models, strongly advocated by the unions, is currently being considered in the PFA's new strategic contract. This is happening because of the profitability issue of electric vehicles, which are unaffordable for the majority of the population. At the same time, it is not clear whether this

new strategy will be translated into an increase in French car production. In Italy, the government shares the same urgency of trade unions to increase Stellantis car production in the country. Nevertheless, the transformation of the topic in a political dispute risks exacerbating the industrial decline of the country.

The comparative analysis of different countries leads us to conclude that social dialogue is a necessary condition for the inclusion of trade unions' voices in the national agenda, particularly with regard to workers' protection and participation. Indeed, IG Metall is better placed than France and Italy to advance its social agenda. At the same time, the design of social dialogue institutions influences trade unions' positions and risks limiting the transformative strategies promoted by them. Moreover, trade unions' alignment with industrial strategy may occur for other economic and political reasons, but this does not guarantee a just transition. Based on these considerations, we propose the creation of social dialogue initiatives at the national level, characterised by paired governance and a cross-sectoral focus. In particular, the EU should integrate the Green Deal Industrial Plan (GDIP), launched in 2023 to support the decarbonisation of EU industry, with a Directive on Just Transition. This legislation should require Member States to create social dialogue initiatives at different levels to promote a systemic just transition. Finally, trade unions should build alliances with environmental organisations and propose just transition strategies based on scientific evidence to strengthen their lobbying activities.

Table 3: Main findings and conclusions

	Germany	**France**	**Italy**
Findings	Misalignment of positions towards the green transition Partial alignment in the type of just transition	Alignment of positions towards the green transition Misalignment in the type of just transition	Misalignment of positions towards the green transition Misalignment in the type of just transition
Conclusions	IG Metall is better placed to include its positions in the final strategy, but the design of the social dialogue initiative influences the union's positions.	Trade unions' call for a car model shift is included in the new industrial strategy for profitability concerns. At the same time, the alignment does not necessarily mean a just transition.	Even if trade unions and the government have the same aim of increasing car production in Italy, the politicization of the topic risks further exacerbating the industrial decline of the Italian automotive industry.

This research is divided into three parts. Part I aims to provide the technical background to the greening of the automotive industry. Drawing on official EU websites and academic papers, we describe the EU regulatory framework and existing decarbonisation levers (section 1.1). Secondly, we describe the role of the automotive industry in the German, French and Italian economies and the employment implications of the transition for the national workforce (section 1.2). To do this, we looked at academic papers, national automotive industry reports and statistical datasets. The main features of the automotive sector are presented and compared in Table A in the appendix.

Part II presents the theoretical framework that underpins our empirical discussion. The analysis of international organisations' declarations on just transition highlights the importance of social dialogue in promoting a just transition (section 2.1). Given the existence of different typologies of decarbonisation strategies, we review the literature and, based on existing frameworks, develop a specific framework to better capture the differences and commonalities between trade unions' positions and national industrial strategies (section 2.2). By analysing studies on the role of trade unions in the national economy, we present the German, French and Italian systems of industrial relations and governance of the automotive industry at the national level (section 2.3). Converging the decarbonisation strategies' framework with industrial relations regimes, we formulate our research questions and hypotheses on the possible inclusion of trade unions' positions in the industrial strategy.

Part III describes trade unions' positions and industrial strategies on the greening of the automotive industry and discusses the extent to which trade unions' positions are included in the final strategy. We based our discussion on the data presented in Tables B and C of the appendix. For the national industrial strategy, we consulted official government websites where official statements and plans for the greening of the automotive industry are published. From these publications, we extracted climate and industrial targets for the automotive sector, investments for the restructuring of the automotive industry and the "electric ecosystem" (charging infrastructure and battery production), and financial instruments to support the purchase of electric vehicles. Finally, we looked at the social aspects of the transition, such as retraining programmes and protection schemes, as well as the governance structure at the national and industrial levels. The main limitation of collecting data from government websites is the uncertainty about the implementation of these policies and the ease with which they can be changed. At the same time, the aim of this thesis is not to look at the implementation level, but rather to analyse the industrial strategy and its alignment or not with trade unions' positions. Another weakness concerns our ability to gather all the relevant information, given the large number of proposals, packages, measures and investments. This lack of clarity is a major problem for the accuracy of our research. To reduce this gap as much as possible, we looked at the most recent information and cross-checked it with other materials such as academic research, newspaper articles, and interviews. We acknowledge the possibility that certain dimensions may be missing, but through the extensive collection of information, we believe we have been able to encapsulate the main lines of the government's approach and narrative. Further research could improve the precision of those information. To encapsulate trade union strategies, we collected their positions through press releases from online newspapers and

official documents published by the unions on their official websites. In the case of alliances with other associations, we consulted joint reports. We also used existing academic research on trade unions' positions on the green transition which are based on direct consultation with trade unions. Finally, we conducted interviews with 1 German, 3 Italian, and 3 French trade unionists. We also participated in several conferences and meetings in Brussels with the presence of trade unions and experts working in the automotive industry. Although more interviews could improve the depth and precision of the analysis, there is a consistent amount of information available online from which it is possible to draw a picture of trade union understandings of the green transition of the automotive sector. Nevertheless, this method has several limitations. Firstly, trade union statements are not directly translated into action and their concrete responses may differ from their initial strategy. Secondly, there may be different positions within the same union, depending on the context and the spokesperson making the statements. To limit this weakness, we stayed at the strategic level to see what kind of discourse unions are developing on the issue, without focusing too much on the concrete actions they have developed. Finally, we have only reported on elements that are regularly present in trade union discourse and that are also mentioned in additional sources such as academic literature and civil society organizations. Our analysis focuses mainly on the national level where the main strategy is developed. We recognise that trade unions play a major role at the industry, company and plant levels. Thus, we also mention some developments in trade union initiatives at the industry level. Also in this case, further research is needed to better assess our findings.

Part I

Greening the automotive industry: European and national contexts

In this section we set the scene for the discussion of the just transition in the automotive industry in Germany, France and Italy. We look at the EU regulatory framework shaping the transition and the decarbonisation levers to achieve carbon neutrality in the transport sector. Second, we present the automotive industries in Germany, France and Italy and the negative employment impacts of the climate transition. This helps us understand why trade unions are actively calling for a just transition that leaves no worker behind.

1. 1 Regulatory framework and decarbonisation levers

In 2019, the president of the European Commission Ursula Von Der Leyen announced the decarbonisation cornerstone of the European Union, namely the European Green Deal (EGD) which aims at making the European Union carbon neutral by 2050. As part of the EGD, the "Fit for 55" legislative package sets the legally binding objectives of reducing EU emissions by 55% by 2030. To reduce CO2 emissions from passenger cars, which account for 13% of the EU's greenhouse gas emissions (European Commission, no date), the European Parliament adopted the Commission's proposal in September 2023 to ban the sale of petrol and diesel cars from 2035.

Fossil fuel phase-out can be achieved through a mix of technological and consumption decarbonisation levers. The main technological lever used by OEMs is the shift from internal combustion engine vehicles (ICEVs) to electric vehicles (EVs), whose "potential savings in the GHG emission are about 90%" (Verma, Dwivedi and Verma, 2022). Despite having zero tailpipe emissions, the environmental impact of EVs depends on the type of energy mix used to power them. In addition, electric batteries require large amounts of natural resources such as lithium, cobalt, nickel and rare earths. Their extraction, processing and transport are highly polluting activities and have a negative impact on the livelihoods of local communities. Moreover, these resources are mostly located in developing countries such as Chile, Peru and Indonesia (International Energy Agency, 2022), and the growing demand for natural resources risks exacerbating neo-colonial power imbalances. The second technological lever is the use of alternative fuels such as e-fuels and biofuels, which can be used in ICEVs. At the same time, their use "requires about five times more (renewable) electricity than directly using electricity in an equivalent battery electric vehicle" (Ueckerdt et al., 2021, p. 385). Second, while electrification is a viable decarbonisation pathway for passenger cars, other transport modes, such as shipping and aviation, rely on alternative fuels as their main decarbonisation lever.

Within this discussion, the type of vehicle plays a very important role in achieving decarbonisation targets. In 2009, the European Commission adopted the first EU CO2 emissions standard to use a weight-based criterion. This choice was largely lobbied for by car manufacturers producing heavy and expensive (premium) cars, such as BMW, Audi and Volvo, and opposed by cheaper and smaller (generalist) cars OEMs. Such a measure is very negative

for decarbonisation as it means lighter cars with stricter CO2 standards. As a result, the EU market has seen a shift towards bigger, heavier and more expensive cars that provide high margins for OEMs. This so-called "upmarket drift" (Pardi, 2023) has high environmental and social costs, which are exacerbated by the shift towards electrification. First, premium vehicles consume more energy and natural resources than smaller vehicles. Second, premium EVs are unaffordable for the majority of the population, undermining the renewal of the car fleet and the possibility of the transition. Finally, the premium strategy is highly profitable for OEMs but does not benefit workers, as producing fewer cars means fewer jobs. This discussion is particularly relevant to understanding why all trade unions in France, Germany and Italy are calling for a car model shift towards lighter and cheaper electric vehicles.

The third decarbonisation lever differs from the other two in that it does not involve a change in production, but rather a modal shift in transport patterns. While technological innovations such as electric vehicles are necessary, their limitations need to be complemented by demand-side changes. Decarbonising the transport sector means providing accessible, affordable and reliable transport options that can reduce reliance on individual road transport and promote shared, public and active mobility. At the same time, while public transport can easily replace private cars in urban areas, the level of public transport infrastructure is lower in rural areas. As a result, the right mix of technological and behavioural changes can provide the solutions needed to effectively reduce transport-related CO2 emissions.

1.2 Impacts at the national level

The shift towards electric vehicles and new mobility patterns entails a deep restructuring of the European automotive industry and, as a consequence, of its workforce. The sector accounts for 7% of the EU GDP (European Commission, 2024) and 7.8% of the total EU employment (ACEA, 2023). More specifically, the employment impacts of the transition vary from country to country, depending on the specificities of the national automotive industry. Given our focus on France, Germany and Italy, we present the main information on the automotive industry of those countries and the impacts of the green transition at the national level.

Germany

Germany produced 3,332,609 cars in 2021 (ACEA, 2023), positioning itself as the 1st producer in Europe and 4th in the world (OICA, 2023). Given its turnover of €470,005.5 million (Eurostat, 2024) and an 11% share of the total manufacturing employment, the industry plays a major role in the German economy. The market is composed of domestic OEMs such as Audi, BMW, Mercedes-Benz, Volkswagen, and Porsche which are mainly characterized by a premium market strategy. Except for the negative impact of Covid-19, the level of employment and production of the German economy remained at a high stable level during the past 20 years. At the same time, the challenges of decarbonisation, digitalisation, and global competition are putting under pressure the German position in the EU and global market. In addition, the high energy prices that Germany is experiencing due to the war in Ukraine are making the German automotive industry particularly vulnerable. First, Chinese and USA electric car manufacturers (BYD and Tesla) are increasing their market share in Europe and the world. Second, the shift

towards green mobility and the increasing importance of autonomous and connected driving are pushing OEMs to change their traditional business model. Volkswagen is committed to exiting the combustion engine industry between 2033 and 2035, Audi from 2026, and Mercedes Benz at the end of the decade, while BMW's goal is to make full-electric vehicles 50% of its production by 2030 (Boewe and Schulten, 2024). In terms of employment, "between 130,000 and 300,000 [...] will be lost in the German automotive industry. [...] In addition, there may be a further decline of 40,000 to 70,000 jobs by 2030 in industries closely linked to the automotive industry, such as metal products or rubber and plastic goods" (Federal Ministry for Economic Affairs and Energy, 2019). Although new market segments such as battery production or software development will create job opportunities, "it is doubtful that a focus on the different areas of the electronic powertrain will be sufficient to compensate for the work volumes lost by the drive change." (Boewe and Schulten, 2024, p. 30).

France

France produced 950,188 cars in 2021 (ACEA, 2023), ranking third in the European automotive industry after Germany and Spain. The French automotive industry employs 7.2% of total manufacturing employment (ACEA, 2023) and generates a turnover of € 119,601.8 billion (Eurostat, 2023). The only domestic OEM is Renault since the French Peugeot S.A. (PSA) merged with the Italian American Fiat Chrysler Automobiles (FCA) in 2021 to form Stellantis. The company is partly owned by the French state (6.1% of Stellantis shares) and has a strong presence in the region. As a result of the "upmarket drift" and the decisions by Renault and Stellantis to relocate their production in other countries, "between 2004 and 2022, the automotive sector has lost almost 134,000 permanent employees, or 44% of the workforce" (Carbonell and Pardi, 2024, p. 8). The decarbonisation of the industry represents an important challenge for the industry. Both Renault and Stellantis committed to 100% electric production in Europe by 2030. "Electrification is having a negative impact on employment in France: rather than reversing the ongoing restructuring of the sector over the last twenty years, it is accelerating it" (Carbonell and Pardi, 2024, p. 2). Regardless of new industrial projects such as the Renault ElectriCity, the lower level of the workforce needed for electric vehicles, the relocation of production to new destinations such as Morocco and Turkey, and the "upmarket drift" are translated into a further decline of the French automotive industry. Similar conclusions are shared by the ETUI and European Climate Foundation (2023) which compare different scenarios according to the level of policy intervention, the creation of battery production and company strategy modifications. In all six cases, employment levels will fall, ranging from -55% in the worst-case scenario to -34% in the best-case scenario.

Italy

The Italian automotive industry accounts for 5.2% of the total manufacturing employment (ACEA, 2023) and a turnover of €60,797.4 billion in 2020 (Eurostat, 2024). While in the past Italy was at the core of the European automotive market, in the last two decades the country experienced a strong decline in car production and employment. "Italy has gone from 1.410 million vehicles in 1999, to only 473,000 in 2022, showing the biggest percentage drop (-66.45%)" (Gaddi, 2024, p. 2) compared to other countries. Looking at the employment level, "from 1996 to 2022, over 45,000 jobs were lost in the sector (-21.5%)" (Gaddi, 2024, p. 5) and

it would have been even bigger without the social shock absorbers implemented by the state. The only domestic-born OEM is Fiat which in 2014 merged with the American Chrysler Group LLC, creating FCA. In 2021, FCA merged with PSA, resulting in Stallentis. Since Stellantis dominates the production of passenger cars in Italy, the industry mainly depends on its production decisions, which are increasingly moving away from Italian plants to other countries such as Slovakia, the Czech Republic and Romania. The situation risks being further exacerbated by the decarbonisation challenge. By looking at Stellantis' future strategy announced in the "Dare Forward 2030", there is no clear strategy for Italian plants. "Although it has been quite some time since the plan was presented, there is still no definite information about Italy's future." (Gaddi, 2024, p. 7). Without a clear strategy from Stellantis, the transition to electric vehicles will have "consequences that are only partly imaginable and will have certain effects for the components and more generally for the entire supply chain (from the supply networks to those of sales)" (Calabrese et al., 2023, p. 92).

Analysis of the national car industries shows us the negative impact of decarbonisation in the German, French and Italian car industries. As workers' representatives, trade unions are concerned about job losses and want to ensure that workers do not bear the costs of the transition through a just transition. This leads us to the second part of our research, which looks at what a just transition is and the institutional settings which shape the role and power of trade unions in the national economy.

Part II

Just transition and industrial relations: a theoretical framework

Part II provides the theoretical framework that underpins our empirical analysis of whether trade unions' positions are included in the national industrial strategy for the automotive industry. First, by looking at the definition of a just transition, we note the importance of social dialogue and trade union involvement in the decision-making process. Second, by reviewing the literature on environmental labor studies, we highlight the existence of different understandings of what makes a transition just. In particular, we develop an analytical framework applicable to trade unions and industrial strategies for the decarbonisation of the automotive industry. Thirdly, we give a comparative analysis of the French, German and Italian industrial relations regimes. By distinguishing the roles and powers of trade unions in these three countries, we provide the background for formulating our hypotheses on where we can expect trade unions' positions to be incorporated into the national strategy.

2.1 What is a just transition? The importance of social dialogue

As we have seen, the greening of the car industry has a negative impact on employment. To overcome the apparent dilemma between environmental protection and employment, there is a growing space in civil society, academia and politics around the concept of just transition. The point of reference for defining just transition is the International Labour Organization's (ILO) "Guidelines for a just transition towards environmentally sustainable economies and societies for all" (ILO, 2016), which is based on four pillars: social dialogue, social protection, decent working conditions and employment. In the document, the ILO sets out the premises for defining the role of each stakeholder in ensuring a just transition for all. Governments are given the responsibility to "provide opportunities for the participation of social partners at all possible levels and stages of the policy process through social dialogue, and to promote consultation with relevant stakeholders" (ILO, 2016, p. 8). With a specific focus on industrial policy, the ILO highlights the need to ensure that new regulations are socially acceptable. This can be achieved through the direct and serious participation of stakeholders in the decision-making process. Complementary social protection systems and training facilities are essential mechanisms to help workers cope with the effects of decarbonisation policies. Governments are called upon to anticipate these impacts and provide workers with the necessary tools.

These guidelines have been used on several occasions as a social North Star for the green transition, particularly by European trade union confederations. Given the massive impacts of the climate transition on European industry, trade unions are increasingly calling for their voices to be included in the European Union's green agenda. Indeed, both the European Trade Union Confederation (ETUC) and IndustriAll highlight the lack of a social dimension in the European Green Deal. In a joint statement with the European Economic and Social Committee, IndustriAll stressed the need for "active and permanent social dialogue and trade union involvement as a precondition for anticipatory management of change. [...] This requires a

greater role for industrial policy and effective policy coordination in developing transition pathways for different sectors and ecosystems" (IndustriAll, 2021). Similarly, the European Trade Union Confederation (ETUC) supports the European Union's climate goals but claims that the "Fit for 55" package is "far too weak on the social dimension" (ETUC, 2021). To fill in the missing social part, the ETUC calls for massive public and private investment, a new governance framework to anticipate employment impacts, social dialogue structures in the design of industrial strategies, the inclusion of just transition strategies in national energy and climate plans, social protection systems, trade union involvement in training programmes and general support for trade unions. From ILO, ETUC and IndustriAll claims, we conclude that trade unions' involvement and social dialogue are necessary conditions for a just transition. Based on this premise, the research aims to check whether trade unions are involved in social dialogue initiatives at the national level and to what extent their strategies are part of the industrial strategy of the automotive industry.

2.2 Varieties of decarbonisation strategies in the automotive industry

To answer these questions, it is important to acknowledge the existence of different typologies of just transition. Highlighting these differences is extremely important when comparing trade unions' positions and the national industrial strategy. Even though they may both be in favour of a just transition, their understanding of it may be very different. Given their role as workers' representatives, trade unions are the most accountable for including workers' voices and rights in the green transition strategies. For this reason, we want to specify what trade unions are saying and to what extent they are heard at the national level.

According to the literature, just transition strategies can range from affirmative to transformative strategies. On the one hand, there is the paradigm of "ecological modernisation" which consists of "greening the economy within existing institutional parameters" (Kalt, 2022, p. 503). On the other hand, stakeholders "assume that the current political-economic system is incapable of achieving the changes required to deal with the environmental challenge and must be opposed" (Kalt, 2022, p. 503). More specifically, the Just Transition Research Collaborative (2018) identifies four just transition approaches: *status quo, managerial, structural and transformative*. First, according to the *status quo approach*, the climate challenge can be addressed without changing the global rules of capitalism, but through market-driven initiatives. Governments must create an enabling environment for businesses and consumers, and justice will be achieved through the creation of new green jobs. This corporate-led approach has a narrow understanding of justice that does not take into account the distribution of jobs in terms of access and the negative externalities created by the new green industries. Second, the *managerial reform approach* claims that a just transition can be achieved within the existing economic system, with some adjustments to labour standards to protect workers' health and the environment. Without challenging the existing economic model and balance of power, stakeholders see "social dialogue and tripartite negotiations between governments, unions and employers as the process through which rights and benefits can be secured." (Just Transition Research Collaborative, 2018, p. 13). Thirdly, the *structural reform approach* argues that to achieve procedural and distributive justice, the governance and power model of decision-

making at both the national and company levels must become more democratic. Collective ownership and social power must replace private management and social dialogue. Finally, the *transformative approach* argues that the dilemma between labour and the environment is deeply intertwined with racism, classism and patriarchy. Tackling these issues at their roots means a complete restructuring of the political and economic system.

By using those definitions to the case of the automotive industry, we develop a specific typology based on the type of governance and social measures present in the national industrial strategy and in trade unions' positions:

1. *Status quo approach:* Without any kind of institutional change at national and company level, the green transition of the automotive industry can be achieved in an just way through the creation of new jobs in other sectors, such as battery production. The role of government is to create an enabling environment for businesses through R&D incentives and EV subsidies and support a smooth transition through reskilling programmes.
2. *Managerial approach*: A just transition can be achieved through social dialogue initiatives which involves trade unions. Through their consultations, unions can ensure that workers are protected through the anticipation of the transition, retraining programmes and social protection schemes.
3. *Structural approach*: By acknowledging the weaker role of trade unions in the political economy, including their voices through social dialogue initiatives is not enough to ensure a just transition. The state should play an active role in ensuring the empowerment of workers through the green transition. For example, public funding for the green transition should be subject to strong social conditionalities such as collective bargaining and co-determination rights. Complementary, more democratic institutions should be created to manage transition funds at both national, regional, and company levels.
4. *Transformative approach*: Without reversing the existing power dynamics between labour, capital and the state, the green transition will exacerbate the existing inequalities embedded in capitalist society. A collective mobilization against how the automotive industry is organized is necessary to redesign power and governance structures.

In addition to the just transition typology, we find another element that distinguishes different trade unions' positions and national strategies, namely their positions on the green transition. Thomas and Doerflinger (2020) develop three ideal types of trade unions' positions towards climate policy: (1) *Opposition*: trade unions deny human-induced climate change; (2) *Hedging*: while accepting the decarbonisation target in principle, trade unions "seek to minimize regulation, advocate incremental approaches" (Thomas and Doerflinger, 2020, p. 390); (3) *Support*: unions are proactive in addressing the implications of the transition and seek to be involved in the design of policies to decarbonise the economy. This framework shows that there are different perspectives on climate change and the climate transition. From the analysis of government discourses and industrial strategies, we draw similar considerations. National governments can indeed resist decarbonisation targets or actively embrace them by proposing a clear strategy. Building on those fundings, we develop a typology of positions on the green transition in the specific case of the automotive industry:

1. *Opposition* is used when trade unions or the government oppose the phasing out of fossil-fuelled vehicles.
2. *Hedging* is used when there is no explicit opposition to the ban on fossil-fuelled cars by 2035, but the union or government does not provide a clear strategy on how to achieve it. While acknowledging the need to decarbonise the sector, there is an attempt to reduce the speed of the transition in the name of job losses or through the reduction of financial resources for the green transition.
3. *Support* is used when there is an explicit commitment to the decarbonisation target and the development of a strategy to achieve it. As we saw in section 1.1, there are different sustainability pathways for decarbonising the automotive industry, ranging from technological change to advocating a mobility transition with a reduced role for individual motorized mobility. Thus, we can further differentiate stakeholders' strategies according to the mix of decarbonisation levers they advocate for:
    a) *Low support*: decarbonising the automotive sector means moving away from fossil-fuelled cars to electric vehicles or the use of alternative fuels (technological change in the car)
    b) *Medium support*: altogether with technological change, decarbonising the car industry entails a shift in the car model from big and expensive cars to small and cheap cars for both affordability and environmental concerns (shift in the car model)
    c) *Strong support*: greening the automotive industry cannot be achieved only with technological change, but also with the reduction of car traffic. Sustainable mobility means the complementarity between e-cars, trains, public transport and active mobility such as cycling and walking.

By bringing together these two dimensions, namely the type of just transition and the position towards the green transition, we design the framework represented in Table 4 which helps us to encapsulate and compare trade unions' positions and industrial strategies.

Table 4: Typology of trade unions and industrial strategies

Type of just transition	**Transformative approach**				
	Structural approach				
	Managerial approach				
	Status quo approach				
	Opposition	**Hedging**	**Low support**	**Medium support**	**High support**
	Position towards the green transition				

2.3 The role of trade unions in the national economy

To understand whether and to what extent trade unions' positions are included in industrial strategy, our research compares France, Germany and Italy. The choice of these countries is based on the different powers and roles that trade unions have in the national economy. While in Germany unions have more power and institutional channels to influence national decision-making, in France and Italy unions have weaker positions and are less and less consulted. Figure 1 in the appendix shows the main characteristics of national industrial relations according to several elements which distinguish the national economy. To better understand the institutional context in which trade unions operate, we look at three dimensions of industrial relations: the production regime, industrial democracy and the role of the social partners in public policy. We also present the governance of the automotive industry at the national level, showing how unions are involved in the decision-making process. These theoretical classifications are complemented by a brief mention of recent developments in union power in each country. Indeed, academics report that trade unions are currently undergoing a process of weakening for a number of reasons, including austerity measures, "a decline in the large-scale manufacturing industries in which unions formerly had a major stronghold, [...], rapid growth in diverse forms of "atypical" employment, with increasing labor market insecurity and rising unemployment, [and] the process of "globalization", which weakens trade union capacity to regulate work and employment within the national boundaries in which they are embedded" (Gumbrell-McCormick et al., 2017, p. 4).

Production regimes: labor-capital-state relationship

With production regimes, the table refers to the "Varieties of Capitalism" literature initiated by Peter Hall and David Soskice. According to how companies, trade unions and states act in the market, national economies can be differentiated between liberal market economies (LMEs) and coordinated market economies (CMEs). In contrast to LMEs which are based on the principle of competitivity among firms, "the equilibria on which firms coordinate in coordinated market economies (CMEs) are more often the result of strategic interaction among firms and other actors." (Hall and Soskice, 2001, p. 8). CMEs are, indeed, characterized by stronger unions' involvement in management decisions. For example, "top managers in Germany rarely have a capacity for unilateral action. Instead, they must secure agreement for major decisions from supervisory boards, which include employee representatives as well as major shareholders" (Hall and Soskice, 2001, p. 24). In CMEs, the state enables and ensures the coordination between companies and trade unions without strongly intervening. While Germany is a coordinated market economy, France and Italy are neither CMEs nor LMEs. Schmidt (2012) defines them as statist market economies (SMEs) given the interventionist role that the state plays in the national economy. "In SMEs, not only is the state more "influencing" than in the "liberal" state of LMEs and the "enabling" state of CMEs but relations between firms, labor, and the state are also characterized by a more hierarchical logic of interaction than in market-reliant LMEs and nonmarket CMEs" (Schmidt, 2012, p. 3). The distinction between coordinated market economies (Germany) and statist market economies (France and Italy) helps us to understand the different roles played by each actor in shaping industrial policy. In particular, it reveals the institutionalized involvement of trade unions in dealing with market

coordination problems in Germany and the less relevant role in France and Italy, where policy decisions are usually unilaterally taken by the state.

Industrial democracy: employees-employers relationship

Industrial democracy can be "broadly understood as the governance of the employment relationship based on social dialogue, collective bargaining and workers' participation at company level" (Rodríguez Contreras *et al.*, 2020, p. 33). Given the strong role that trade unions play at the industry and company levels, Germany is characterized by a higher level of industrial democracy compared to Italy and France, where trade unions are less powerful. The analysis of the relationship between employers and employees helps us understand the context in which unions operate, whether or not they can influence company's decisions and why French and Italian unions are advocating for more decision-making power.

Germany has a dual system of representation, with multi-employer bargaining at industry level and works councils at company level. Collective bargaining is strong, coordinated and centralized. It is enshrined in the constitution and does not involve state intervention. At company level co-determination is guaranteed by law. In addition, the "one industry, one union" principle allows for better cooperation between unions and employers' associations. While Germany was once considered an example of trade union power, trade union density fell from 33% in 1991 to 16% in 2020, and industrial collective bargaining coverage from 85% to 51% (Müller and Schulten, 2023, p. 461). This trend leads to a polarization between "export-oriented industries and the public sector, where the traditional features of the German industrial relations system are still largely in place" (Müller and Schulten, 2023, p. 460) and service sectors which are "characterized by a far-reaching erosion of the traditional model of German industrial relations" (Müller and Schulten, 2023, p. 460). The car industry is at the former end of the spectrum, with the national union IG Metall still powerful. This union has a social democratic identity and seeks to advance workers' rights through consensual decisions within the existing political and economic setting (Crouch, 2017).

France is characterized by "multichannel employee representation, fragmented trade unions and employers' organizations, and adversarial relations between trade unions and employers, compensated by strong state interventionism" (Rehfeldt and Vincent, 2023, p. 422). The French industry has a high level of collective bargaining coverage thanks to the legalised extension mechanism. In fact, even if the net union density is only 9%, collective bargaining coverage is 98% (Rehfeldt and Vincent, 2023, p. 422). In 2016, French President Emmanuel Macron reversed the hierarchy of collective bargaining from the industry to the company level. This move towards decentralisation, combined with the economic crisis, weakened the bargaining power of trade unions. It also accentuated the polarisation of power between small companies, where there are no unions, and large companies, where unions still play a role. The three main unions in the car industry are the CGT (Confédération Générale du Travail) Métallurgie, which has a communist tradition and revolutionary aspirations, the CFDT (Confédération française démocratique du travail) Métallurgie, which has an ex-Catholic and reformist tradition, and the reformist FO (Force Ouvrière) Métaux.

Italian industrial relations are characterized by the pluralistic landscape of employees' and employers' associations, the conflictual relationship between trade unions and companies, and a high level of voluntarism and the abstention of the law on "social partners' representativeness, the effects of collective agreements, minimum wages, the right to strike and employee participation" (Leonardi and Pedersini, 2023, p. 625). Collective bargaining coverage is high thanks to the de facto extension mechanism. Indeed, even if net union density is 32.5%, collective bargaining coverage is at 80% (Leonardi and Pedersini, 2023, p. 626). "The two-tier collective bargaining structure – with the national industry level prevailing over company bargaining – can still be considered centrally organized" (Leonardi and Pedersini, 2023, p. 626). There is no co-determination at company level, and the absence of workers' representatives and labour inspectors jeopardizes the implementation of collective bargaining. The three main national confederations in the car industry are FIOM-CGIL (Federazione Impiegati Operai Metallurgici-Confederazione Generale Italiana del Lavoro), based on the Marxist model of trade unionism, FIM-CISL (Federazione italiana metalmeccanici-Confederazione Italiana Sindacati Lavoratori), characterized by "the defense of collective autonomy from state interference, a historical vocation for decentralized bargaining, employees' participation and, today, for occupational welfare" (Leonardi and Pedersini, 2023, p. 628). Finally, the UILM (Unione Italiana del Lavoro Metalmeccanici) aims to represent the needs of Italian society beyond professional status.

Role of social partners in public policy

The role of social partners in public policy is also referred to as the level of corporatism and is particularly relevant for our analysis on the power of trade unions to influence policy making. As labour and capital representatives, social partners can exert political influence and engage in lobby activities. In Germany, trade unions do not have direct decision-making power, but have institutionalized channels to ensure workers' interests are heard in policymaking. "First, as an interest group, unions try to establish links with political parties and governments to influence policy making; second, as corporate actors, unions are directly involved in the decision-making processes of many institutions that are an integral part of the social market economy" (Müller and Schulten, 2023, p. 483). In addition, they have a prominent role in public discourse and in influencing economic policy discussion through their research institutions. Finally, German unions are increasingly engaged in public campaigns and broader political issues such as the just transition. By building coalitions with other NGOs and associations, they try to influence the policymaking process on subjects that go beyond job-related topics.

In France, "from 2000 until 2015, both left- and right-wing governments pronounced themselves in favor of concertation with the unions" (Rehfeldt and Vincent, 2023, p. 445). This move ended under President Hollande in 2015 when "tripartite concertation at peak level, which had nearly achieved a neo-corporatist character, has lost its impetus" with reforms being passed without prior concertation (Rehfeldt and Vincent, 2023, p. 421). Given the contemporary lack of their involvement, French trade unions often use industrial conflict to influence policy making. The strike rate is, indeed, one of the highest in Europe, despite the low level of strike funds. Nevertheless, this instrument is losing its effectiveness. Additionally, French trade unions enjoy broad public support, have been able to mobilize non-union workers, and after

Covid-19 they are increasingly building alliances with environmental and societal organizations.

In Italy, trade unions do not have institutionalized channels through which to influence the policymaking process. In fact, "social concertation has progressively waned since the late 1990s, as most governments have maintained a mostly unilateral approach to economic and employment reforms" (Leonardi and Pedersini, 2023, p. 650). This was reinforced by the presidency of Silvio Berlusconi who in 2001 reduced even more the room for tripartite social concertation. Since they cannot participate in tripartite agreements, "hearings before the relevant parliamentary committees represent a traditional channel that social partners use to influence law-making" (Leonardi and Pedersini, 2023, p. 649). In addition, the connection with civil society organizations is a strong channel through which Italian trade unions exercise their power. This represents an alternative way through which they can respond to contemporary challenges, such as the green transition.

The governance of the automotive industry

Given our focus on the automotive industry, this section presents the social dialogue initiatives which bring together all relevant stakeholders to decide the strategy of the automotive sector. In Germany, the social partners are involved in industrial governance. The Alliance for the Future of Industry brings together trade unions, industry associations, the Association of German Chambers of Industry and Commerce and the Federal Ministry for Economic Affairs and Climate Protection. Its main objective is to maintain the competitiveness of the automotive industry, and it works in "groups to develop common industrial policy guidelines, recommendations for action and sets of measures" (German Federal Ministry of Economics and Technology, 2024). The Alliance is characterized by paired governance between employer and employee organizations, providing IG Metall with an institutionalized channel for influencing the industrial strategy. As the IG Metall representative told us, it is true that IG Metall plays a role in designing the strategy, but the final decision depends on the government's willingness to implement the plan.

In France, the national social dialogue initiative which gives directions for the automotive industry is the Plateforme Filière Automobile. Created in 2008, the PFA publishes every four years the "Contrat Stratégie de Filière". By bringing together the main stakeholders of the automotive industry, namely OEMs, subcontractors and trade unions, it defines the vision for the automotive industry in terms of innovation, competitiveness and employment. At the same time, trade unions only have a consultative role and do not have a strong power to influence the final strategy. As interviews with French trade unionists confirmed to us, the PFA is controlled by domestic OEMs and its unpaired governance does not allow trade union's voices to be effectively and concretely involved in the decision-making process.

In Italy, there is usually no social dialogue happening at the national level. The only exception is the Tavolo Automotive which was created in December 2023 by the Ministry of Enterprises and Made in Italy. The table involves the Ministry of Labour, ANFIA (the automotive industry confederation), trade unions, regions concerned by the automotive sector and Stellantis. It is

organized around five working groups: formation and occupation, supply chain, research and development, competitiveness and efficiency, production levels and market. The governance is unpaired with the state playing a major role and Stellantis being the main interlocutor. Trade unions have indeed only a consultative role and, as interviews with Italian trade unions confirmed us, they remain unheard.

The analysis of the different institutional contexts in which trade unions operate gives us a clear picture of the existing power dynamics between trade unions, companies and the state in Germany, France and Italy. Those considerations directly apply to our discussion on the importance of the involvement of trade unions through social dialogue to ensure a just transition. In Germany, trade unions have a strong role at the sector and company level and have institutionalized channels for influencing policy making. In addition, the industrial strategy is the result of paired cooperation between social partners. This creates a positive environment for the inclusion of trade unions' positions in the national industrial policy. On the other hand, both Italian and French trade unions have a weaker and irregular role in policy making and they are losing ground in collective bargaining agreements at the industry level. This undermines the possibility of their voices to be included in the final strategy. Building on those considerations, which have already been resumed in table 1 in the introduction, we formulate the research question and hypotheses of our research.

RQ: Are trade unions' positions towards the decarbonisation of the automotive industry included in the national industrial strategy?

H1: in countries (Germany) characterized by a coordinated market economy, a high level of industrial democracy and the institutionalized involvement of social partners, we expect trade unions' positions to be included in the national industrial policy.

H2: in countries (France and Italy) characterized by a statist market economy, a low level of industrial democracy and an irregular involvement of social partners, we expect trade unions' positions not to be included in the national industrial policy.

Part III

National industrial strategies and trade unions' positions: the empirical analysis

Part III describes and compares national industrial strategies and trade unions' positions according to the just transition typology developed in section 2.2, which includes two dimensions: the position on the green transition and the type of just transition. Table 2 in the introduction summarizes our findings on the typology of trade unions and industrial strategies. By comparing them, we assess the extent to which trade unions' positions are taken into account in the national industrial strategy. Based on our findings, we draw conclusions about the importance of social dialogue in ensuring a just transition, but also about the limitations of existing initiatives in pursuing broader societal and environmental transformations. In addition, we highlight how an alignment between trade unions and industrial strategies does not necessarily mean a just transition.

3.1 Germany

The transport sector accounts for 20% of Germany's greenhouse gas emissions, of which 60% are from petrol and diesel cars. To achieve carbon neutrality, the German government has set a target to reduce emissions by 42% by 2030 (Federal Government, 2020). Given the size and importance of the German automotive industry, meeting these targets require significant investment to decarbonise the value chain and support workers through the transition. Nevertheless, "in November 2023, the Federal Constitutional Court declared the credit-based parts of a separate federal "Climate and Transformation" investment fund (totalling €60 billion unconstitutional). The underlying problem is the so-called "debt brake" in the German constitution (which is much more rigid than the budget rules of the Stability and Growth Pact at EU level" (Lehndorff, 2024, p. 7). This choice led to a decrease of support for the decarbonisation of the automotive industry, in particular an end to EVs subsidies, raising concerns about the implementation of the industrial transition.

In the following sections, we compare the German national industrial policy for the automotive industry with IG Metall's positions on the future of the automotive industry. Given the strong role of IG Metall in the Alliance for the Future of the Industry, we expect its positions to be included in the national industrial strategy. Our results show that there is a partial alignment between the type of just transition advocated by IG Metall and the industrial strategy. On the contrary, we find a misalignment in terms of positions on the green transition, with IG Metall calling for strong support for decarbonisation of industry and mobility transformation, and the state reducing its support for the environmental transition.

3.1.1 The German industrial strategy: more just than green

The German industrial strategy for the automotive industry was presented by the Federal Ministry for Economic Affairs and Climate Protection in 2023 under the name of "Industrial policy at the turn of the century". It was developed on the basis of the guidelines and

recommendations provided by the Alliance for the Future of Industry. The strategy takes the form of a *managerial-hedging approach*. In terms of the position on the green transition, the national strategy is characterized by a commitment to the decarbonisation of the automotive industry, but also a declining support to the decarbonisation of the sector, represented by the cut on the climate fund in November 2023. In terms of the type of just transition, the industrial strategy provides both reskilling programmes and recognises the importance of collective bargaining and co-determination rights. In addition, it supports the creation of democratic institutions for the management of the transition in which trade unions are included.

Position towards the green transition: from low support to hedging

Germany has embarked on a strategy to decarbonise its automotive industry with the aim of having 15 million BEVs by 2030 in its vehicle fleet and 10.9 million private and public charging points by 2030 (Federal Ministry for Economic Affairs and Climate Protection, 2023). To achieve these targets, the German government initially allocated a €6 billion investment package to be used between 2023 and 2026. With this fund, the Federal Ministry for Economic Affairs and Climate Protection (BMWK) aims to promote R&D, innovation projects and battery ecosystems. Together with the modernisation of the value chain, the national industrial strategy is committed to developing battery production to increase its independence from external countries such as China. One example of this is the construction of the Northvolt Gigafactory, which received €902 million in support from the German government. This has been complemented by support for the purchase of electric vehicles, which was introduced in 2016 ("Umweltbonus"). Together with a CO2-based vehicle tax, this measure was key to boosting demand for EVs and meeting the climate target. At the same time, due to cuts in the climate fund, "support for electric company cars was phased out by September and following a budget crisis at the end of the year, the government decided to end all EV support almost overnight" (Wettengel, 2024). This decision is highly problematic for the decarbonisation of the industry. If customers are not incentivised and supported to buy an electric car, fossil fuel cars will not be phased out and climate targets will not be met. Even if the strategy supports the decarbonisation of the sector to maintain its competitiveness, the lack of financial supports brings us to define the industrial strategy as characterized by a *hedging approach.*

Type of just transition: the typical German industrial relations

In view of the employment effects of the transition and the change in tasks in the value chain, the German government recognises the need to support companies in the retraining and re-qualification of their employees. "With the law to strengthen training and further education, the federal government further developed the labor market policy funding instruments this year to counter the accelerated transformation in the world of work and avoid unemployment caused by structural change. A central instrument is the newly introduced qualification allowance, which will come into force on April 1, 2024. It benefits companies that would have to cut jobs due to structural change but can enable future-proof employment in the same company through further training" (Federal Ministry for Economic Affairs and Climate Protection, 2023, p. 41). In addition, the "Work of Tomorrow Act" provides for "investments in training during the operation of the short time work scheme" (IOE, 2020) and the "Network for further training" aims to bridge the gap between old and new skills. In terms of trade unions' involvement, the

industrial strategy mentions the importance of collective bargaining, social dialogue and co-determination for the stability of the industry. In addition, part of the automotive fund is earmarked for "the promotion of regional transformation networks and transformation hubs" (Federal Ministry of Economics and Climate Protection, 2023, p. 54), in which trade unions are involved. For these reasons, the national industrial strategy can be characterized by a *managerial approach*.

3.1.2 German trade union: IG Metall

IG Metall is characterized by a *structural-high support approach*, given its advocacy for strong environmental and social transformation. "The declared overall policy of IG Metall — which is supported by large parts of the organization including many automotive industry works councils — has a primarily proactive orientation and takes the broad field of action required for the transformative transformation into consideration" (Lehndorff, 2024, p. 27). The union is aware of the need to move beyond a technological fix discourse and embrace a systematic approach to the mobility transition. Given the strong position of the German automotive industry, those stands are quite surprising and show the commitment of the union to meet the decarbonisation target. In terms of institutional change, the union calls for strong social conditionalities to public funds and a further expansion of co-determination at the company level.

Position towards the green transition: the call for a mobility transition

In IG Metall's mobility proposal published in 2023, IG Metall clearly calls for a shift from individualized motor vehicles to a combination of e-cars, trains, public transport, walking, and bicycling (IG Metall, 2023b). At the center of IG Metall's vision stands intermodality, namely the complementarity of different modes of transport, which can be achieved through the digitalisation and connectivity of cars and public transport. This position was already present in 2021, altogether with BUND (Friends of The Earth Germany), when IG Metall called the upcoming federal government to implement a new regulatory framework claiming that "laws that have so far often unilaterally prioritized individual motorized transport must be revised in the interests of socially acceptable and climate-friendly mobility. [...] Traffic as a whole must be reduced" (IG Metall and BUND, 2021). Additionally, in 2021 IG Metall and GDB (the main union confederation) formed the "Alliance for Socially Acceptable Mobility Transition" with several environmental NGOs and other trade unions (such as Ver.di) to call for a mobility transition. According to IG Metall's views, the state must strongly support the development of the infrastructure for the mobility transition: railway and local transportation expansion, charging infrastructure, and connectivity development. For the electrification of the automotive industry, the state should invest in the construction of battery and chip factories, software development and new business models. Complementary, "the mobility transition is not possible without a greatly accelerated energy transition" (IG Metall, 2023b, p. 17). This became even more urgent in light of the high energy prices after the war in Ukraine. Given the restructuring entitled by the mobility transition, at the 2023 Mobility Summit, Joerg Hoffman emphasized the massive amounts of investments needed by the transition, calling politicians to speed up (IG Metall, 2023a).

IG Metall is also interested in the question of the affordability of EVs for ensuring a green transition. The union is advocating not only for the reintroduction of EV subsidies but also for a change in the car model towards lighter and more affordable cars. The "upmarket drift" of the automotive industry has negative consequences for the affordability of EVs and "reinforces the common cliché that electric cars are for the rich, thereby fuelling the old false dichotomy between climate protection and social concerns." (IG Metall, 2023b, p. 13). Producing unaffordable cars is problematic not only for environmental and social concerns but also for employment and competitiveness aspects. This became clear in September 2023 when Volkswagen announced the cut of almost 270 employees in the totally-electric plant of Zwickau, due to low demand for EVs. As a response, Dirk Schulze, head of IG Metall's Berlin-Brandenburg-Saxony district, warned that "automakers and suppliers need to speed up the mobility turnaround by investing in lightweight construction" (MarketScreener, 2023).

This transformative approach has not always been at the core of IG Metall's strategy. During the social dialogue initiative on the German recovery plan in response to Covid-19 (Autogipfel), IG Metall lobbied for a "technology-open approach that would include support measures for the producers of both electrified and more traditional ICE cars" (Lechowski et al., 2023, p. 11). This diverges from IG Metall's stance that "battery-powered electromobility is currently the only drive technology that can be quickly implemented on an industrial scale and makes achieving the 2030 climate goals realistic" (IG Metall, 2020). There is indeed a gap between the decarbonisation strategy proposed by the union and the positions that it took during this decision-making process. The explanation could rely on the influence that the design and goal of social dialogue initiatives have on the trade union. Since on the Autogipfel focused on ensuring the sector's resilience during the crisis time, the main concern of IG Metall was to protect the level of employment in the short term, leaving outside broader environmental and social considerations. The type of social dialogue indeed influences the trade union position. Similar conclusions are driven for the case of the industrial strategy, as we will argue in section 3.1.3.

Type of just transition: the call for more democratic planning

As workers' representative, IG Metall has at its core the protection of workers' rights. Reskilling and training schemes must be implemented for accompanying workers in the transition process. Both the State and companies have an active role in "replacing the tasks that are no longer necessary with new tasks – for example with the production of components for electric drives or battery production" (IG Metall, 2023a). Similarly, "companies must pursue sustainable business models and train their employees accordingly" (IG Metall, 2020). To ensure a smooth and just transition, "politicians must support this with a clever and active industrial policy and prevent companies from using the transformation to reduce well-secured jobs and create new ones, primarily in low-wage locations abroad" (IG Metall, 2023b, p. 19). Thus, the state must provide a clear industrial policy framework which ensures the supply of raw materials, semiconductors and batteries. All those programmes must come with "binding social and ecological criteria: regional employment and location development, qualification, training quotas, company codetermination, collective bargaining" (IG Metall, 2023b, p. 17). Complementary to reskilling programmes, the Government must ensure social security and

protection (IG Metall, 2023a). The call for the implementation of welfare state schemes became even louder after the austerity measures implemented by the government. IG Metall disagrees with this economic choice arguing that "ecological change can only occur with sufficient social investments. People can only be supported with social security. Our welfare state therefore requires solidarity-based financing so that it can decisively cushion the economy and structural change" (IG Metall, 2024).

According to IG Metall, a just transition does not only mean accompanying workers in the transition but also giving space for strong workers' participation in decision-making processes. At the federal level, IG Metall demands the creation of regional platforms to which public money should be tied and which are composed of "different actors from politics, administration, science, work councils, trade unions and social and environmental associations" (IG Metall and BUND, 2021, p. 2). A first step in this direction is the creation of "Regional transformation networks" (or Concerted Mobility Action, KAM) which bring together all relevant stakeholders in a certain region to exchange knowledge about the risks and opportunities of the transition at the local level. Being sponsored by the Federal Ministry for Economic Affairs and Climate, "a total of 27 regional transformation networks will be funded nationwide by mid-2025 of which IG Metall is involved in 25." (IG Metall, 2023b, p. 18). At the sectoral level, collective bargaining should be a "prerequisite for public procurement and funding" (IG Metall and BUND, 2021, p. 2) and the state should indeed support the expansion of collective agreements "through state regulation, social, employment policy and ecological award and funding criteria as well as tax policy incentives" (IG Metall, 2023b, p. 23). At the company level, "employees need to experience that they are not at the mercy of change but can help shape it. This is only possible with more democracy in the company" (IG Metall, 2024) which can be achieved through an expansion of co-determination rights (IG Metall, 2023b) and new bargaining instruments. An important step towards a higher inclusion of workers in the decision-making process at the company level is the "Future-oriented collective agreements". Such mechanisms include "agreeing on future products and location perspectives, investing in employees and their skills [...], involving the employees in the visions of the future and the works councils concretely in the implementation and monitoring of success even after an agreement has been concluded" (Lehndorff, 2024, p. 31). At the same time, to be effective, those mechanisms need to go beyond the workplace level and apply more broadly to the industry. Being controversial and against companies' interests, this can be achieved only through the support of public institutions.

3.1.3 Comparison: when deciding means compromising

The comparison between the national industrial strategies shows the importance of social dialogue in protecting worker' rights, but also its limitations in promoting broader environmental and societal changes. In terms of the position towards the green transition, the industrial strategy focuses on maintaining the competitiveness of the automotive industry without taking into account the change in the car model and mobility patterns. Furthermore, the decreasing financial support for the transition and the removal of EV subsidies show the government's decreasing commitment to achieving the decarbonisation target. This further widens the gap with IG Metall's call for massive investments for ensuring a mobility

transformation. In terms of the type of just transition, the industrial strategy partially incorporates IG Metall's demands. The industrial strategy mentions the importance of co-determination rights, collective bargaining and implements reskilling programmes. In addition, the creation of "Regional transformation networks" are positive steps towards more democratic planning at regional level. These elements make the industrial strategy relatively just. At the same time, in this case too, IG Metall is arguing for a higher level of institutional change, such as the extension of co-determination rights at company level and the implementation of strong social conditions for public funding and tax reforms. The lack of rethinking of corporate governance shows the resistance of the state to "exert influence and develop alternative forms of ownership to bring longer-term social necessities to bear as counterweights to short-term shareholder interests" (Lehndorff, 2024, p. 8).

Letting aside the decreasing financial support from the government, we believe that the reasons for IG Metall's inability to pursue its transformative strategy through existing social dialogue initiatives lie in the design of such platforms. The fact that the Alliance for the Future of the Industry aims to maintain the competitiveness of the industry could explain why there is no space to consider the green transition as an opportunity to move beyond the role of the car towards shared, public and active mobility. By focusing only on the car industry, such a platform does not provide the space to make bridges with different sectors, such as public transport, where new job opportunities could compensate the job losses in the automotive sector. This narrows down IG Metall's positions, which end up in focusing only on incremental proposals and the protection of workers employed in the automotive industry. This explanation could also be applied to IG Metall's advocacy of maintaining ICEV production in the allocation of Covid-19 funds, despite its pro-EV positions.

The German case shows us the importance of social dialogue, but also its limits. As expected, IG Metall is in a better position to influence the national industrial strategy. Indeed, its demands for a just transition are partly reflected in the final strategy. At the same time, the design of such a social dialogue initiative is incapable of incorporating the broader societal and environmental transformations advocated by IG Metall. Finally, the diminishing financial support for the transition and the end of subsidies for electric vehicles threaten the very possibility of implementing the decarbonisation of the industry. This highlights the importance of government support.

3.2 France

In France, the transport sector accounts for 31% of national greenhouse gas emissions, of which 54% are from passenger cars. As part of its decarbonisation strategy, the state has set a target to reduce emissions from the sector by 28% by 2030 compared to 2015 and to achieve carbon neutrality by 2050 (République Française, 2021). Given the current decline in production and employment in the automotive sector, the decarbonisation of the sector could either reinforce this trend or be used as an opportunity to relocate production in the territory.

In the following sections, we compare the national industrial policy officially announced by the French government with the positions of French trade unions on the future of the automotive industry. Given the unpaired governance of the PFA, we expect that their understanding of just transition to not be included in the industrial strategy. Our findings confirm that the low level of trade union involvement in the decision-making process results in a gap between the type of just transition demanded by the unions and that provided by the national strategy. At the same time, in terms of positions towards the green transition, the inclusion of the car model shift in the forthcoming industrial plan reflects trade unions' positions. However, this alignment does not necessarily benefit French workers, given the lack of location conditionalities which ensure the production in France.

3.2.1 The French industrial strategy: greener than just

The French industrial strategy for the automotive industry was presented by the French government in 2020 under the name "Plan de Soutien à l'automobile" and is based on the guidelines and recommendations of the PFA. The French strategy takes the form of a *status quo-medium support* approach aimed at providing investment to companies and subcontractors for the production of small electric vehicles. Although the general objective is to increase production on French territory, there are no location conditionalities to ensure that public funds benefit French workers. In terms of the type of the just transition, while there are funds for accompanying workers, there is no broader involvement of trade unions and workers' voices in the decision-making process.

Position towards the green transition: from low to medium support

In response to the Covid-19 crisis, the French government launched the "Plan de Soutien à l'automobile" (Ministère de l'économie, des finances et de la souveraineté industrielle et numérique, 2020) to support the transition of the automotive industry and achieve the goal of producing 2 million EVs per year by 2030. It was updated in 2023 to acknowledge the steps that were made during 2020-2023. The overall aim of the French strategy is to maintain production in France and to encourage the creation of new products in the country, avoiding offshoring and relocation. In order to promote "industrial sovereignty", the French government is concentrating on supporting Renault and its suppliers in the value chain. On the one hand, "Groupe Renault will benefit from the state-guaranteed loan scheme for a total of €5 billion" (Ministère de l'économie, des finances et de la souveraineté industrielle et numérique, 2020, p. 8). On the other hand, as part of the "France 2030" package, a fund of €8 billion supports companies' investment and innovation projects (Ministère de l'économie, des finances et de la souveraineté industrielle et numérique, 2020). In addition, the plan provides for the necessary investments to produce 120 GWh of batteries by 2030, such as the Renault ElectriCity in Douai and the four gigafactory battery projects in Hauts-de-France. Finally, the "Avenir Programme" emarks €200 million to achieve the target of 7.2 million recharging points by 2030. Moreover, aware of the need to support the demand side to ensure the electrification of the car fleet, the plan provides for an electric vehicle bonus of up to €5,000 for the purchase of electric vehicles, a scrapping scheme and an additional voucher of €2,000 for low-income families.

Although not yet present in the official industrial strategy of the automotive industry, Renault is currently changing its business strategy, moving from premium to generalist car production. In 2020, Luca de Meo, CEO of Renault, announced: "I'd rather produce 50,000 premium cars than 200,000 cars that don't make any money" (Carbonell and Pardi, 2024, p. 7). This position changed completely in November 2023 when he said: "Making small vehicles accessible is something of a speciality for us at Renault. I think we've found a good solution: the small electric vehicle gives us this opportunity. Our idea is to do this in Europe, with a competitive offer" (Carbonell and Pardi, 2024, p. 12). These ideas are expected to be partly reflected in the new "Contrat Stratégie de Filière 2023-2027", which is still in the process of being drawn up, as the CFDT representative revealed us. For its commitment and support to the green transition and the shift in the car model, the French strategy is characterized by a *medium support approach*.

Type of just transition: the absence of social dialogue

"France 2030" provides for a fund of €2.5 billion ("Competences and Metiers d'Avenir") to finance retraining programmes and an exceptional extension of protection schemes for retraining workers made redundant as a result of the difficulties faced by subcontractors. Given the regional impact of the transition, the package also includes specific instruments for the local level, such as the "Industrial Rebound" which supports them with engineering support and specific funds (Ministère de l'économie, des finances et de la souveraineté industrielle et numérique, 2023). At the same time, the absence of measures relating to social dialogue and institutional change at national and industrial level make the strategy a *status quo approach*. This reflects the low level of trade union involvement at national and industrial level that characterizes the French industrial relations regime.

3.2.2 French trade unions: CGT Métallurgie, CFDT Métallurgie, FO Métaux

Despite some differences between the CGT Métallurgie, the CFDT Métallurgie and the FO Métaux, the unions' priority is to reshoring the production of light and cheap electric vehicles on French territory in order to reverse the decline of French industry. The French government is seen as the key to achieving this objective, with strong location conditions on public funding to ensure that EV production takes place in France. Furthermore, affordability is at the heart of the unions' positions, which call for a change in the car model towards lighter and cheaper cars. Finally, both CGT Métallurgie and CFDT Métallurgie recognise the need to promote a change in mobility, while FO Métaux continues to focus on protecting the automotive sector. In terms of type of just transition, all the unions are calling for strong participation both at the level of industrial policy and in company boards, so that workers' voices can be included in national and company strategies. While for CFDT FO Métaux this can be achieved through the creation of new social dialogue platforms, CFDT Métallurgie demands also eco-social conditionalities to public funds, and CGT Métallurgie calls for a citizens' mobilisation to radically change the power dynamics in the industry. For these reasons, we can characterise the trade union approaches as follows: CGT Métallurgie as *transformative-high support*, CFDT Métallurgie as *structural-high support* and FO Métaux as *managerial-medium support*.

Position towards the green transition: a Made in France strategy

In the forum organized by CGT Métallurgie in May 2023 in Montreuil on the EU ban on ICEVs, the union argued that "100% electric is a social and environmental aberration" (CGT Métallurgie, 2023b) for environmental, social and industrial reasons. Similar considerations were put forward as early as 2021 in the CGT Métallurgie proposal for the future of the automotive industry (CGT Métallurgie, 2021). Firstly, the electrification of large and heavy vehicles implies the use of large quantities of raw materials and energy, which are harmful to the environment. Secondly, the rising price of electric vehicles is creating major inequalities among the population, the majority of whom cannot afford them. This means opening the door for Chinese cars to enter the French market. Finally, the upmarket drift is pushing generalist OEMs such as Renault and PSA to move their production to countries such as Slovakia and Romania where labour is cheaper, leading to the deindustrialisation of France. In response to these trends, CGT Métallurgie envisages a mixed strategy of small electric vehicles for short daily journeys, hybrid vehicles for long journeys, which account for 20% of French transport needs, and public transport in urban areas (CGT Métallurgie, 2023a). In order to relocate production, the CGT Métallurgie calls for the state to "steer the ecological transition, because if we leave decisions to the manufacturers, we will be very badly off" (CGT Métallurgie, 2023b). David Blaise, member of the Federal Industry Bureau of the CGT Métallurgie, stated: "It is time to take the issue seriously and relocate production to create the conditions for the reindustrialisation that our country needs, to rebuild the economy and to guarantee our independence, especially in strategic sectors" (CGT Métallurgie, 2023b). To avoid offshoring, the CGT Métallurgie proposes not to subsidize companies that produce abroad and to implement the carbon border adjustment mechanism.

The position of the CFDT Métallurgie was published in the 2021 report "How to respond to the challenge of a just transition?". Based on research by the "Fondation pour la nature et l'homme", the union compares four possible scenarios for the automotive industry and their impact on employment: 1) Deindustrialisation: -70% of the workforce by 2050; 2) Continuation of the recovery plan launched in 2020: -48% of the workforce by 2050; 3) Industrial revival: same level of employment, but very unrealistic; 4) The just transition: same level of employment. The last scenario, supported by the CFDT Métallurgie, is characterized by "the acceleration of the transition to electric vehicles, with the objective of 100% zero-emission new vehicles by 2035, and a move towards more rational production and use" (CFDT Métallurgie, 2021, p. 10). The CFDT Métallurgie advocates a complementarity between fully electric and hybrid vehicles and argues that technological solutions must be combined with sobriety measures such as a change in the car model, the promotion of a circular economy and, in the long term, the degrowth of the automotive industry. Moreover, a CFDT Métallurgie representative told us that the ecological transition should not focus only on one sector but understood systematically. In order to avoid further deindustrialisation, the CFDT Métallurgie is calling on the state to support a Made in France strategy, in which public aid is directed towards products with the French label. Indeed, the state must act as a strong regulator of the transition by introducing eco-social conditions for public funding and by setting clear standards for vehicle and battery emissions. This could prevent Chinese batteries from entering the market because of their higher environmental impact compared to European batteries.

Both CGT Métallurgie and CFDT Métallurgie's initiatives show that "the trade unions in France are attempting, slowly but firmly, to move away from the reactive position in which they have found themselves in recent years, administering the decline. They are taking a more long-term view of employment". (Carbonell and Pardi, 2024, p. 16). From its side, FO Métaux wants that the transition happens 'with the industry' and without leaving any worker behind. The union's positions on how to manage the transition was published in the report "Propositions Auto" in November 2023. While acknowledging the threats that the ban on ICE puts on the French industry, the union looks at how using the electrification challenge as an opportunity to relaunch the French car industry (FO Métaux, 2023). In the strategy, there is no mention of a mobility transition, and the priority of the union is to create in France the right condition for increase the car production in France. As a FO Métaux representative told us, the decarbonisation of the automotive industry needs to look at the whole automotive ecosystem. This means investing in battery production, energy transition, supporting the subcontractors, and R&D. Affordability is also at the core of the union's strategy: "France must be at the heart of a range of entry-level electric vehicles centred on the B segment at affordable prices" (FO Métaux, 2023).

Type of just transition: the call for a paired governance

In terms of accompanying workers through the transition, the CGT Métallurgie calls for investment in the training and qualification of workers (CGT Métallurgie, 2023b). The CFDT Métallurgie scenario for a just transition proposes both individual and collective transition initiatives. Among them, the "CEP Transition Pro" mechanisms allow "the employee to be absent from his job in order to undergo training for qualification, development or retraining" (CFDT Métallurgie, 2021, p. 39). Similarly, "Collective transitions" can help workers move from one activity to another within the same region. Indeed, as a representative of CFDT Métallurgie told us, the green transition should be approached from a territorial perspective in order to see how, within the same territory, redundancies can be balanced by new opportunities. For example, the union is proposing the creation of social dialogue initiatives at regional level to identify potential bridges between job losses and opportunities. FO Métaux points to the need to look at the whole automotive value chain: "Vocational training, employee support and skills acquisition programmes specific to the downstream sector must be supported to complement the initiatives to be developed for the upstream industrial sector" (FO Métaux, 2023). In order to accompany workers and territories through the transition, the union calls for the introduction of a paired GPEC (Gestion prévisionnelle de l'emploi et des compétences), which will make it possible to monitor and plan the transition. Finally, as a representative of FO Métaux told us, along with job protection and retraining programmes, good working conditions must be protected.

The weakness of the trade union voices in the strategic planning of the car industry leads the unions to fight for their inclusion in the decision-making process. CGT Métallurgie is calling for the mobilization of workers and citizens to reverse the current unequal power between the labor and the capital. According to our interviewee, the rethinking of the car industry should take place at European level in order to create a common plan which does not put at the center

OEMs profits, but workers' rights. At the national level, governance should be more open and paired to involve trade unions and environmental organizations. A specific criticism is made of the PFA, which does not concretely include trade unions' positions (CGT Métallurgie, 2023a). The CFDT Métallurgie proposes three different channels of representation: 1) organizing the "Etats généraux de l'automobile" to bring together all the actors in the value chain and civil society, 2) strengthening workers' representation on company boards. "Employees must be able to intervene in the definition of strategic orientations, to debate not the delocation but the relocation of jobs in the context of a reinvention of the production model", 3) European funds such as the Social Cohesion Fund and the Just Transition Fund should be linked to regional social dialogue initiatives (CFDT Métallurgie, 2021, p. 40). Similarly, the FO Métaux emphasizes the need for an open and paired governance, in particular in the PFA. At both national and European level, the union calls for planning to be "strengthened and paired through consultation, public debate, the involvement of the parties concerned and - why not? - Etats Généraux" (FO Métaux, 2023).

The low level of trade union involvement is not only at national level, but also at company level. "The absence of codetermination or any other means of influencing company strategy reduces the unions' ability to participate in decision- making. They continue to intervene "from the outside" and their industrial projects remain, so far, a dead letter". (Carbonell and Pardi, 2024, p. 16). In the absence of bipartite social dialogue at national and company level, trade unions act mainly through collective bargaining. At the same time, collective agreements are increasingly taking the form of "Ruptures Conventionnelles Collectives" (voluntary redundancy plans), which allow companies to manage redundancies more smoothly. This tool was developed as an exceptional measure during the 2008 crisis and became applicable to normal situations in 2016 under the government of Emanuel Macron. Furthermore, in June 2021 unions signed a new collective agreement for the creation of the Electricity Project. Signed by Renault and all the unions, "the idea behind the agreement was to offer the unions the allocation of a B-segment vehicle at Electricity, the installation of a battery housing production workshop in Ruitz, the installation of a battery factory in Douai and 700 new hires (half in Maubeuge, and half distributed between Douai and Ruitz), in exchange for concessions on wages and working conditions" (Carbonell and Pardi, 2024, p. 11). This agreement could be seen as a positive step towards a just transition. At the same time, this initiative, which has been used in other cases, is not only detrimental to working conditions, but does not necessarily guarantee the maintenance of employment and production levels. "The aim of these agreements is, therefore, less to halt the decline than to accompany or administer it, since the production and employment curve in the automotive industry continues to fall, despite the signing of numerous 'job preservation' agreements" (Carbonell and Pardi, 2024, p. 11).

3.2.3 Comparison: when affordability means profitability

The comparison between the French industrial strategy and the French trade unions shows us that not having a strong role in social dialogue does not allow trade unions to pursue their just transition strategy in the industrial policy. At the same time, trade unions can influence the final strategy under specific conditions regardless their consultative role. With regard to the first point, the final strategy does not include any of the institutional changes at national and

company level that the unions have been calling for. The unpaired governance of the PFA is criticised by the unions since it puts at the centre OEMs profits and do not include their voices. On the second point, Renault's shift in strategy from premium to generalist cars reflects trade unions' positions on the need to move towards cheaper and lighter cars. As the interview with a CFDT Métallurgie representative informed us, the forthcoming "Contrat Stratégie de Filière 2023-2027" includes trade union considerations for a change in car models for making EVs affordable. Renault's strategy shift could be attributed to the company's profitability objective of producing mass market EVs, which attract a portion of the population who cannot afford electric vehicles. At the same time, it is not clear whether these new cars will be produced in France or in other countries. Given the failure of previous attempts by the government to relocate production in the French territory (Lechowski, Krzywdzinski and Pardi, 2023) and the lack of the location and eco-social conditionalities requested by CGT Métallurgie and CFDT Métallurgie, it is not clear whether this strategy will reverse the French industrial decline. This leads us to notice that the inclusion of trade unions' positions does not necessarily lead to a just transition.

The French case shows us that trade unions can influence the final strategy even if they do not have a strong role in the decision-making process. The issue of affordability, which is at the heart of the French trade unions' positions, can be a leverage point on which to build alignment with the industrial strategy. At the same time, without other measures such as location conditionality, this alignment does not necessarily benefit French workers. Finally, the unpaired governance of social dialogue initiatives leads trade unions to demand their inclusion in the decision-making process.

3.3 Italy

Transport accounts for 30% of total GHG emissions in Italy, and the sector should reduce its emissions by 43.7% by 2030 compared to 2005 levels (Ministero dell'Ambiente e della Sicurezza Energetica, 2023). Despite these targets, the Italian government is not seriously embarking in its decarbonisation strategy. As the Ministry of the Environment and Energy Security, Picchetto Fratin recently announced: "We will abolish the restriction wanted by Frans Timmermans which foresees a ban on the production of internal combustion cars in the EU from 2035" (Fraioli, 2024). This oppositional strategy undermines the country's environmental transition and the uncertainty of the regulatory framework risks exacerbating the strong decline of the automotive industry of the country.

In the following sections, we discuss the strategy promoted by the Italian government with Italian trade unions' positions on the future of the automotive industry. Given the weak role of Italian trade unions in the Tavolo Automotive, we expect that their positions will not be included in the government's discourse. Our findings confirm this hypothesis, but also show that even when trade unions and the government share the same positions this does not necessarily entail a positive outcome for trade unions.

3.3.1 The Italian industrial strategy: neither just nor green

At the time of writing, the Italian automotive industry lacks a clear industrial strategy. While a specific fund of €8 billion has been allocated to the automotive industry, there is no clear vision of how these resources will be distributed, except for the provision of low emission vehicles subsidies. The Italian government's overall goal is to fight the decline of the automotive industry by increasing Stellantis production to 1 million vehicles per year. In order to achieve this goal, the Italian government set up the Tavolo Automotive in December 2023 to discuss the future of the automotive industry. At the same time, the table is not achieving any concrete results and the government's refusal of the EU ban is undermining the core of the green transition. In terms of the type of just transition, trade unions have only a consultative role and their demands are largely unheard, with no mention of retraining programmes, social protection systems or institutional change. For those reasons, the Italian national strategy can be labelled as a *status quo-opposition approach*.

Position towards the green transition: opposing environmental regulations

Regarding the electrification of the automotive sector, Italy aims to have 4.3 million electric vehicles in its car fleet by 2030 (Ministero dell'Ambiente e della Sicurezza Energetica, 2023). To support the greening of the automotive industry, the government set up in 2022 the "Automotive Fund" of €8.7 billion to be used by 2030. The main tool provided by the government is EV subsidies, launched in February 2024 under the name "Ecobonus". The total financial allocation for this scheme is €950 million and it support not only EVs but also fossil-fuelled vehicles (Ministero delle Imprese e del Made in Italy, 2024). Other measures are "development and innovation contracts" (750 million) and charging infrastructure. Finally, the fund will support the construction of the gigafactories, such as the ongoing project in Termoli. The remaining part of the fund has not yet been earmarked. The government's aim is to mobilize it to support Stellantis production, but it is not clear how. Moreover, the government's opposition to the ICEVs ban reveals a deep uncertainty about whether and how environmental goals will be achieved. This is problematic not only for climate change concerns, but also for the industry since Stellantis does not have a clear idea on which types of investments should be made.

Type of just transition: the absence of justice

The Italian industrial strategy lacks a social dimension, both in terms of reskilling and social dialogue. Despite the recognition of the need to replace existing skills with new ones, there is no specific initiative to support skills development. The absence of this element can be explained by the priority given by the Italian government to restarting and safeguarding car production in Italian plants. Given the sharp decline in employment levels, the main objective is to increase the number of jobs in the sector, while skills development remains marginal. The only social measure to accompany workers in the transition is the traditional system of the "Cassa Integrazione", the unemployment insurance fund. Already widely used by Italian companies to deal with redundancies, the potential further decline in employment levels due to electrification will depend on the use of this measure. In terms of social dialogue, the government has for the first time brought together all the relevant industrial stakeholders in the

Tavolo Automotive. However, here too the trade unions have only a consultative role and little influence on the final strategy. Finally, there is no mention of collective bargaining or co-determination at company level.

3.3.2 Italian trade unions: FIOM, FIM, UILM

Faced with the decline of Italian industry, FIOM, FIM and UILM share a common priority of relocating production to Italian car plants. Given the dependence of the workforce on the production of ICE technologies, a badly managed green transition is perceived as accelerating industrial decline. Unions are therefore calling for the state to provide a clear industrial policy. In terms of the position towards the green transition, FIOM is comparatively more committed to the environmental challenge and, as part of the "Clima Lavoro Alliance", recognises the need to move beyond the paradigm of technological fixism and to rethink mobility as a whole. FIM and UILM agree with the decarbonisation of the industry, but do not propose a specific decarbonisation path, remaining focused on the negative impact of the transition. In terms of just transition, all three unions call on the state to involve them in the decision-making process. The Tavolo Automotive is an extraordinary initiative of social dialogue which stands up in the Italian industrial landscape which is characterized by the lack of social dialogue at the national level. At the same time, the unions point out that even in this case their voices remain unheard and its politicization risks negatively impacting the automotive industry. For those reasons, their positions are labelled in the following way: FIOM as *managerial-high support*, UILM as *managerial-hedging*, and FIM as *managerial-hedging*.

Position towards the green transition: the focus on reindustrialisation

Encapsulating trade unions' positions towards the green transition of the automotive industry is particularly difficult in the Italian case given the lack of a clear strategy from the government upon which trade unions can position themselves. Generally speaking, all trade unions agree with the decarbonisation targets, but only if they are accompanied by an industrial strategy which re-industrialise the Italian car industry. In the FIOM strategy for the car industry published in 2022 (FIOM-CGIL, 2022), the union agrees with the decarbonisation objectives and proposes its own vision on how to meet this target. FIM and UILM do not explicitly call for the green transition, but they acknowledge it, and they urge for strong and specific industrial policies in response to the fossil-fuelled cars ban (FIM-CISL, 2022; 2024a) and concrete actions for meeting the 2035 ban in a socially responsible way (UILM, 2023). In all cases, the commitment of unions to a green transition comes with the request of using the production of EVs as a leverage point upon which to increase car production. For this to happen the state must design specific industrial policies to support the industry and a clear decarbonisation pathway. In a joint statement, the three trade unions called for the creation of the right conditions to make the Italian territory attractive for OEMs investments. The state should indeed provide investments for R&D and support the productivity capacity of car plants and subcontractors (Beltrametti *et al.*, 2023). According the FIOM representative, public funds should come with strong location conditionalities to ensure production to happen in Italian plants.

Coming to broader environmental considerations, only FIOM-CGIL recognises the need for a mobility transition. The union is part of the "Climate Job Alliance" which organizes

conferences and tries to mobilize citizens to promote sustainable mobility and just transitions. In 2023, the alliance published a report containing its vision for the future of the transportation sector. Altogether with advocating for the production of electric vehicles in the Italian territory, the Alliance pointed out that "we need incentives for the reduction of private cars" (Alleanza Clima Lavoro, 2023). As a consequence, public investments in local transportation, the renovation of the railway infrastructure and the construction of cycling pathways are claimed as necessary for the transition.

To promote the electrification of the car fleet, the FIOM-CGIL and UILM agree that it is important to support the demand for electric vehicles through subsidies. At the same time, without support for the production side, these funds will be used by customers to buy foreign cars and not to stimulate Italian production. For example, in 2022 the 80% of EVs subsidies went to foreign manufacturers (Bonora, 2023). As FIOM claims, "stimulating demand should be the final act of an industrial policy on the automotive sector as a whole" (FIOM-CGIL, 2024b). In addition, the Ecobonus scheme was presented during one of the roundtable discussions of the Tavolo Automotive to be approved by stakeholders. On that occasion, trade unions pointed out its limitations and suggest its modifications, but any of their claims were heard at the national level. Finally, FIOM-CGIL called for a change of the car model from premium vehicles to mass market production: "The time has come to say that this [premium] business model is no longer up to date, that we must return to the production of mass-market vehicles to intercept the demand of the middle and working classes who will soon have to change cars" (FIOM-CGIL, 2023b).

Type of just transition: the call for social dialogue

Italian trade unions are pushing for the implementation of retraining programmes to accompany workers in the green transition. The FIOM calls for "training to update and improve the skills needed to cope with the changes in the sector, using the New Skills Fund, to be renewed, or other similar instruments" (FIOM-CGIL, 2022). Based on the research of the think tank Està, the UILM provides a detailed analysis of the distributional impacts of the green transition, demonstrating the scale of the challenge and the need for investments to address the changes in skills due to decarbonisation and digitalisation (UILM, 2022). In addition, Italian trade unions recognise the social risks involved in even a well-managed transition. They therefore call for social protection schemes such as the "Cassa Integrazione", "occupational regeneration schemes such as pension schemes for older workers and the taking on of younger workers" (FIOM, 2022a) and working time reduction schemes.

In view of the current situation in the car industry and the risk that the green transition will exacerbate the decline in the sector, the Italian trade unions are calling for their participation in the design and management of the transition. The FIOM-CGIL denounced the lack of their involvement in agreements between the industry and the state (FIOM-CGIL, 2023a) and called for a "permanent industry table with the participation of the main car producers in our country" (FIOM-CGIL, 2022). The current Tavolo Automotive represents an extraordinary initiative of social dialogue between the state, Stellantis and the unions. While the table was initially welcomed by the unions as a first step towards a just transition, the first results are far from

what the unions had hoped for. The UILM (2024) pointed out the contradictory and useless nature of the table. The company reiterates its commitment to produce 1 million cars in Italy, but at the same time does not give a clear vision of how production will be distributed among the existing plants. For its part, the Italian government is pressuring the company to increase production by threatening to allow Chinese OEMs to enter the Italian industry. This creates a polarisation between the company and the government, and both FIM-CISL (2024b) and UILM (2024) are urging the company to avoid becoming an "object of political controversy", which risks pushing the company to decrease even more its presence in the Italian territory.

The lack of a clear strategy and support for the relocation of car production in Italy is showing its effects on the decreasing level of employment in Italian car plants. In dealing with the increasing redundancies, FIM-CISL and UILM signed in March 2024 a new agreement with Stellantis named "Accordo per le uscite volontarie" which pushed 1520 workers in Turin to leave the plants and look for a new job (Fornovo, 2024). FIOM-CGIL refused to sign the agreement because it represents a further downsizing of the plant, with Stellantis not hiring any new employee. Additionally, trade unions are trying to make their voices heard through industrial actions. In March 2024, the three trade unions organized a common strike in the Stellantis plants of Mirafiori to push for an increase in the production in the plant and demand a meeting with the Prime President Giorgia Meloni (FIOM-CGIL, 2024a).

A general point made by the FIOM representative during our interview concerns the absurdity of the current situation, which affects not only the Italian situation, but the entire European industry. If we look at Stellantis' margins and revenues, they are high and do not seem to be affected by the negative trends in the automotive industry experienced by the French and Italian workforce. In particular, we notice a decoupling between OEM's profits and employment levels. The former are rising, while the latter are falling. This means that only the workers are paying for the consequences of the green transition. According to the FIOM representative, this is deeply unfair, and the company should be not only oriented towards increasing its profit but be more socially responsible. This point is particularly important because it reveals the structural inequalities which are present in the automotive industry, but not only. For time and space constraints, we will not delve more into this discussion, but we recognise its importance for a further discussion on what a just transition means and how it can be achieved.

3.3.3 Comparison: when alignment is a bad sign

The lack of a clear industrial strategy evidently shows the distance between the government and the trade unions. In terms of the positions towards the green transition, trade unions are demanding to meet the decarbonisation targets (FIOM) and/or provide an effective industrial policy to support the industry (FIM and UILM). On the contrary, the government is refusing to embark on a decarbonisation pathway and does not provide a clear industrial strategy. In terms of the type of just transition, the industrial strategy is lacking a social dimension both in the matter of reskilling programmes and trade unions' inclusion. The only initiative promoted at the national level is the Tavolo Automotive, but trade unions only have a consultative role. This confirms our hypothesis that the lack of trade unions' involvement is translated into a misalignment between trade unions' positions and the government strategy.

The only point common to both the unions' demands and the government's objectives is the aim of relocating production to Italian car plants. The government is asking Stellantis to increase production on Italian territory and this objective aligns with Italian trade unions' priority to relocate car production in the country. At the same time, the reason for the government's position is not to ensure a just transition but to increase its public support. Making this a political issue risks pushing Stellantis further away. As the interview with a UILM representative informed us, it is highly problematic that both the government and the unions are acting in the same way towards Stellantis. On the contrary, it is the role of the unions to maintain a conflictual relationship with the company, but the government should play find an agreement with the company to ensure production in the plants. This leads us to conclude that the alignment between the unions and the government does not necessarily means a positive outcome for trade unions.

The Italian case shows the negative impact that the lack of social dialogue has on the development of a just transition. Firstly, trade union voices are not included in government's decisions, neither in terms of the position on the green transition nor in terms of the type of the just transition. Secondly, even if the trade unions and the government share the same goal of increasing production in Italian car factories, the politicisation of the issue risks exacerbating the decline of the industry.

3.4 Discussion

The comparison between Germany, France and Italy confirms our hypotheses about the influence of the type of industrial relations on the inclusion of trade unions' positions in the industrial strategy. Compared with French and Italian unions, IG Metall plays a stronger role in the formulation of national industrial policy. As a result, its positions are better reflected in the final strategy. This is particularly clear when looking at the type of the just transition of the German, French and Italian industrial strategies. German national industry is the most advanced in terms of retraining programmes, collective agreements, participation rights and social dialogue at national and regional level. Nevertheless, even in this case, IG Metall points to the need for broader support for accompanying workers and new governance structures to manage the transition.

At the same time, the analysis of the German case shows us how the existing social dialogue limits trade unions' positions when it comes to making concrete decisions. As we have seen, there is a gap between the social and environmental transformation envisioned by IG Metall and what the industrial strategy promotes. In particular, there is no room for discussion and concrete action on the new role that the car should play in a transformation of mobility. Additionally, the new strategy does not take into consideration the need to move towards cheaper and lighter vehicles. As we have argued, this could be due to the focus of the social dialogue initiative on maintaining the competitiveness of the German industry. When it comes to design the strategy, the focus of the Alliance on the car industry may lead IG Metall to compromise its positions and advocate only for short-term goals and not for broader industrial

transformations. The design of the social dialogue initiative does indeed influence the outcome of the final strategy. In addition, the decreasing financial support to EVs due to the "debt-brake" puts at risk the possibility of the transition advocated by IG Metall, showing the importance of governmental support.

Trade unions' positions may be included in the final strategy for reasons other than social dialogue. The French case shows that when affordability becomes an issue of profitability, there is an alignment between unions and the final strategy. Similarly, the Italian case shows that there can be alignment for political reasons. At the same time, both economic and political reasons do not guarantee positive outcomes for workers. Unless it is accompanied by strong local conditions, the change in Renault's strategy is unlikely to reverse the decline in production and employment in France. Similarly, the politicisation of the discussion between the government and Stellantis on increasing car production in Italy risks further exacerbating the decline of the car industry, with no room for a just transition.

In conclusion, our research shows that 1) a strong role in social dialogue initiatives is necessary for trade unions to have their positions included in the final strategy, in particular concerning the type of just transition, 2) the design of existing social dialogue initiatives influences the outcome of the national strategy and sector-specific social dialogues limit broader societal and environmental transformations, 3) the alignment between trade unions and the industrial strategy does not necessarily mean a positive outcome for trade unions.

Conclusion and policy recommendations

Phasing out fossil fuel vehicles is as necessary for environmental sustainability as it is worrying for its impact on employment. Given the importance of social dialogue in promoting a just transition, our research aimed to assess the extent to which trade unions' positions are taken into account in the final industrial strategy in the specific case of the decarbonisation of the car industry. We decided to compare three cases, Germany, France and Italy, because of the different roles and powers of trade unions in the national economy. Given IG Metall's strong role in the national economy, both at national and company level, we expected its positions to be included in the country's automotive industrial strategy. Conversely, given the weaker role of the French and Italian unions, we expected their strategy to be less taken into consideration.

To answer this question, we mapped unions' positions and industrial strategies against the typology of decarbonisation strategies developed in section 2.2. We found very different understandings of decarbonisation strategies, both in terms of the position on the green transition and the type of just transition. In particular, we noted the high level of commitment to decarbonisation targets in some trade unions' strategies, such as IG Metall, CGT Métallurgie, CFDT Métallugie and FIOM-CGIL, which call for a mobility transition. These cases are quite surprising given that the car industry will employ fewer people in such a transition. With regard to the nature of a just transition, together with retraining and social protection systems, French and Italian trade unions are calling on the state to involve them in the decision-making process of the national industrial strategy. This demand seems to be explained by the low level of trade unions' involvement in existing social dialogue initiatives. On the other hand, IG Metall already plays a decision-making role, and the union is calling for its decision-making power to be enforced through the creation of institutions to which public funds for decarbonisation should be tied. At company level, the union is pushing for the extension of co-determination rights and "Future-oriented collective agreements".

By comparing trade unions' positions with the national industrial strategies, we found interesting results. In Germany, we found a misalignment between the final industrial strategy and IG Metall positions in terms of the position on the green transition and a partial alignment in terms of the type of just transition. On the one hand, the industrial strategy does not include broader environmental considerations such as a shift in the car model and a reduced role of the car in alternative mobility patterns as IG Metall advocates for. In addition, the decline in financial support for the green transition further exacerbates the gap between IG Metall and the German government. The inability of IG Metall to push for broader environmental considerations through the Alliance for the Future of Industry could be linked to the nature of the social dialogue put in place by the government to manage the transition which only focuses on preserving the industrial competitiveness. On the other hand, we find a higher level of alignment in terms of the type of just transition. Indeed, the industrial strategy mentions the importance of cooperation between trade unions and companies and includes the reskilling programmes advocated by the union. Moreover, the creation of "Regional transformation networks" is a first step towards a more democratic decision-making process. This result shows

the positive character of social dialogue and its importance for a just transition. In conclusion, the German case shows us that social dialogue is a necessary condition for the inclusion of trade unions' positions, but it can also lead to a modification of trade union strategies towards less radical approaches to the green transition. Indeed, the nature of social dialogue initiatives influences the type of decarbonisation strategy which is implemented.

In France, we found a partial alignment in terms of the position towards the green transition and a misalignment in the type of just transition. On the one hand, even if trade unions have only a consultative role, some of their concerns and positions towards the green transition are present in the recent developments of the industrial strategy. Whereas in the past Renault followed the "upmarket lift", the company recently decided to switch to mass market production. This is in line with trade unions' positions, which have been taken into account by the PFA in shaping the new "Contrat Strategique de la Filière 2023-2027", as the interview with a CFDT Métallurgie representative confirmed. At the same time, it is not clear whether this change will increase the French car production, given the lack of eco-social and location conditionalities to public funds, which would ensure Renault to produce in France. On the other hand, trade unions' demands for their involvement in the decision-making process at the national and regional levels are completely absent from the final strategy.

In Italy, we found a mismatch between trade unions' positions and the government's strategy, both in terms of the position on the green transition and the type of the just transition. While the unions are calling for a clear industrial strategy from the state, the Italian government does not have a serious decarbonisation strategy. This is reflected in the lack of a clear industrial strategy for the car industry, apart from subsidies for low emission vehicles. On the other hand, despite the creation of Tavolo Automotive, trade unions have only a consultative role and their voices remain unheard. As a result, there is no mention of retraining programmes, social protection systems or trade union involvement in the decision-making process at both national and company level. The only common ground between the unions and the government is the need to increase car production in Italian factories. In particular, both are calling on the main OEM, Stellantis, to present a clear strategy for achieving the target of producing 1 million vehicles a year in Italian plants. At the same time, the debate between the company and the government is becoming increasingly polarised and the unions are concerned about future decisions the company might take in response to the government's polemical tone. The Italian case shows us that when the government aligns itself with the unions, not to support them but for other political reasons, this alignment does not necessarily mean a just transition.

These considerations lead us to conclude that social dialogue is a necessary but not a sufficient condition for ensuring a just transition. The German case shows that when trade unions have a strong role in the social dialogue initiative, they are better placed to push for the inclusion of their demands, particularly with regard to social protection and the creation of new democratic institutions to manage the transition. This dimension is completely absent in France and Italy, where the weak position of trade unions in the national economy is unlikely to change. At the same time, existing sectoral social dialogue initiatives are not well equipped to design and implement the necessary green transitions that the climate challenge demands. The limitations

of existing technological levers demonstrate the need to complement technological solutions with sobriety measures, which in the case of the automotive industry take the form of shifting the car model and reducing car production. The absence of these considerations in the national strategies is not due to trade unions' disagreement with these objectives, but for other reasons such as OEMs' profitability interests. IG Metall, CFDT Métallurgie, CGT Métallurgie and FIOM-CGIL are in favour of changing mobility patterns, despite the negative impact on employment levels in the car industry.

On the basis of these considerations, we develop the following policy recommendations, which vary according to the stakeholder.

Policy recommendation 1: To implement the ILO recommendations on just transition, the European Commission should propose an EU directive on just transition to complement the Green Deal Industrial Plan. Proposed in 2023, the GDPI represents the revival of industrial policy in the European Union policy arena, which has been rejected in the past due to the "Washington Consensus". This window of opportunity should be used not only to help industry meet environmental targets, but also to improve working conditions and economic security. To this end, the Just Transition Directive should impose strong social conditions on EU and public funds and require member states to set up social dialogue initiatives with paired governance, in which trade unions have a decision-making role.

Policy recommendation 2: At national level, existing social dialogue initiatives in France and Italy should be paired and democratised. Trade unions should play a decisive role in institutions such as the Platform Filière Automobile and Tavolo Automotive, following the example of the governance structure of the German Alliance for the Future of the Industry. This is necessary to better integrate their voices and to counterbalance the profit-oriented objectives of the OEMs, which are at the roots of the automotive decline in Italy and France. In addition, these initiatives should move from a sectoral focus to a cross-sectoral level to prevent these dialogues from limiting trade unions' transformative positions. In the specific case of the car industry, social dialogue should move from a focus on the competitiveness of the car industry to the promotion of intermodality. This should be based on a discussion of what the mobility needs of the population are, according to its geographical location, and how these can be met in a sustainable way. This idea is already present in IG Metall's proposal where the union advocates that "we must draw conclusions from society's need for mobility under ecological conditions to the employment opportunities and risks that arise result from it" (IG Metall, 2023, p. 4). This means not only reducing national CO2 emissions, but also avoiding reliance on the massive extraction of critical raw materials in Europe and third countries, given the negative environmental and social impacts of such activities. A cap on critical resources can be used to avoid these consequences and could be implemented thanks to the involvement of environmental associations in social dialogue initiatives. By designing the sustainable way to meet the mobility needs of the population, it is possible to determine the right dimension of the automotive industry and build bridges with other industries where workers can be employed. By identifying new opportunities in other sectors, government, trade unions and companies can develop transition pathways that simultaneously support workers and meet decarbonisation targets.

Complementary, in managing the transition, the territorial approach is key to identifying connection between car plant closures and new opportunities without obliging workers to move from one place to another.

Policy recommendation 3: Trade unions should strengthen their capacity building in terms of strategy and alliance development. Firstly, increasing their knowledge and proposing specific and detailed strategies, backed by scientific evidence, will increase their accountability and authority in advancing their demands. An example of this is the joint report by the CFDT Métallurgie and the "Fondation pour la nature et l'homme", whose analysis has influenced the forthcoming "Contrat Strategique de la Filière 2023-2027". Secondly, trade unions should build new alliances with environmental organisations in order to increase their power and support upon which strengthening their lobby activity.

Moreover, the main aim of this paper is to open up the academic and political debate on the relationship between industrial relations and climate policy, given the importance of trade unions' involvement in promoting a just transition. As the industrial relations system varies from country to country, it is important to recognise which systems are better suited to promoting a just transition and how countries that are ill-equipped can be improved. It would be relevant to broaden the scope of analysis of social dialogue initiatives in other countries to assess the nature of trade unions' influence on decarbonisation strategies. This analysis can deepen our understanding of the role and position of trade unions in decarbonising industry and the factors influencing their alignment with the national industrial strategy. This is particularly relevant given the revival of industrial policy at national and EU level, which could be used as an opportunity to strengthen worker protection and participation.

Bibliography

ACEA (2023) *Pocket Guide 2023-2024*. Brussels: ACEA. Available at: https://www.acea.auto/files/ACEA-Pocket-Guide-2023-2024.pdf (Accessed: 2 December 2023).

Alleanza Clima Lavoro (2023) *Un'Alleanza per la mobilità sostenibile e la giusta transizione*. Rome: Alleanza Clima Lavoro. Available at: https://sbilanciamoci.info/wp-content/uploads/2023/07/ACL_A5_impaginato_web.pdf (Accessed: 5 March 2024).

Beltrametti, L. *et al.* (2023) *Automotive - Uno scenario regionale. Studio comparativo delle politiche industriali nelle economie automotive di maggior prossimità all'Italia*. Osservatorio Nazionale Automotive. Available at: https://www.anfia.it/allegati_contenuti/DOC/323_STUDIO%20OSSERVATORIO%20AUTOMOTIVE_BENCHMARK%20INTERNAZIONALE%202023.PDF (Accessed: 26 January 2024).

Boewe, J. and Schulten, J. (2024) *Resilient or vulnerable? The double transformation of the German automotive industry and the consequences for employment*. Brussels: ETUI. Available at: https://www.etui.org/sites/default/files/2024-03/06%20Germany-Automotive-Employment-trends.pdf.

Bonora, P. (2023) *Incentivi solo a chi produce in Italia*, *ilGiornale.it*, 7 December. Available at: https://www.ilgiornale.it/news/economia/incentivi-solo-chi-produce-italia-2252226.html (Accessed: 30 January 2024).

Calabrese, G.G., Moretti, A. and Zirpoli, F. (2023) *Osservatorio sulle trasformazioni dell'ecosistema automotive italiano 2022*. Venice: Fondazione Università Ca' Foscari. Available at: https://doi.org/10.30687/978-88-6969-703-6.

Carbonell, J.S. and Pardi, T. (2024) *Can electrification reverse the decline? The French automotive industry and the green transition*. Brussels: ETUI. Available at: https://www.etui.org/sites/default/files/2024-03/03%20France%20-%20automotive%20manufacturers%20and%20the%20green%20transition.pdf.

CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?*. Available at: https://www.cfdt.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 January 2024).

CGT Métallurgie (2021) *Propositions CGT pour l'automobile*. Available at: https://www.cgt.fr/sites/default/files/2021-02/COMPIL_FICHES_AUTO.pdf (Accessed: 25 January 2024).

CGT Métallurgie (2023a) *Compte Rendu: Forum de l'automobile 23 mai 2023 à Montreuil*. Available at: https://ftm-cgt.fr/wp-content/uploads/2023/12/compte-rendu-forum-auto-vf-1-_compressed-1.pdf (Accessed: 19 December 2023).

CGT Métallurgie (2023b) *Droit à la mobilité durable pour tous*. Available at: https://ftm-cgt.fr/wp-content/uploads/2023/04/4-pages-Forum-automobile.pdf (Accessed: 19 December 2023).

Crouch, C. (2017) 'Membership density and trade union power', *Transfer: European Review of Labour and Research*, 23(1), pp. 47–61. Available at: https://doi.org/10.1177/1024258916673533.

ETUC (2021) *ETUC position for A Just Transition Legal Framework to complement the Fit for 55 package*. Available at: https://www.etuc.org/en/document/etuc-position-just-transition-legal-framework-complement-fit-55-package (Accessed: 19 February 2024).

ETUI and European Climate Foundation (2023) *Electrification and employment in the French car industry*. Brussels: ETUI. Available at: https://www.etui.org/sites/default/files/2022-08/France%20electrification%20and%20employment-%20Syndex.pdf (Accessed: 13 March 2024).

European Commission (2024) *Automotive industry*. Available at: https://single-market-economy.ec.europa.eu/sectors/automotive-industry_en (Accessed: 15 April 2024).

European Commission (no date) *CO_2 emission performance standards for cars and vans*. Available at: https://climate.ec.europa.eu/eu-action/transport/road-transport-reducing-co2-emissions-vehicles/co2-emission-performance-standards-cars-and-vans_en (Accessed: 11 April 2024).

Eurostat (2024) *Revenue of motor vehicle and trailer manufacturing in the European Union in 2020, by major country (in million €) [Graph]*. Available at: https://www-statista-com.acces-distant.sciencespo.fr/statistics/1128436/europe-motor-vehicle-and-trailer-revenue-by-country/ (Accessed: 19 March 2024).

Federal Government (2020) *Climate-friendly transport*. Available at: //www.bundesregierung.de/breg-en/issues/climate-action/climate-friendly-transport-1795842 (Accessed: 12 January 2024).

Federal Ministry for Economic Affairs and Climate Action (2024) *Joining forces to strengthen German industry*. Available at: https://www.bmwk.de/Redaktion/EN/Dossier/joining-forces-to-strengthen-german-industry.html (Accessed: 28 February 2024).

Federal Ministry for Economic Affairs and Climate Protection (2023) *Industrial policy at the turn of the century: securing an industrial location, renewing prosperity, strengthen economic security*. Berlin: Federal Ministry for Economic Affairs and Climate Protection. Available at: https://www.bmwk.de/Redaktion/DE/Publikationen/Industrie/industriepolitik-in-der-zeitenwende.pdf?__blob=publicationFile&v=16 (Accessed: 13 January 2024)

Federal Ministry for Economic Affairs and Energy (2019) *Automobile Wertschöpfung 2030/2050*. Berlin: Federal Ministry for Economic Affairs and Energy. Available at: https://www.bmwk.de/Redaktion/DE/Downloads/Studien/automobile-wertschoepfung-2030-2050-executive-summary-english.pdf?__blob=publicationFile&v=1 (Accessed: 13 March 2024).

FIM-CISL (2022) *Automotive: lo stop al motore endotermico richiede scelte industriali precise per garantire la sostenibilità sociale.* Available at: https://www.fim-cisl.it/wp-content/uploads/2022/06/Automotive-Uliano-Fim-Cisl-stop-al-motore-endotermicoora-scelte-industriali-precise.pdf (Accessed: 26 March 2024).

FIM-CISL (2024a) *Automotive, Uliano: in questi anni abbiamo accumulato ritardi, politiche industriali attrattive e non distruttive*. Available at: https://www.fim-cisl.it/2024/02/28/automotive-in-questi-anni-abbiamo-accumulato-ritardi-politiche-industriali-attrattive-e-non-distruttive/ (Accessed: 26 March 2024).

FIM-CISL (2024b) *Stellantis: Gruppo strategico per occupazione ed economia del Paese. La polemica politica non fa crescere le produzioni né difende l'occupazione*. Available at: https://www.fim-cisl.it/wp-content/uploads/2024/01/Stellantis-UlianoFim-Cislgruppo-strategico-per-occupazione-ed-economia-del-Paese.pdf (Accessed: 5 March 2024).

FIOM-CGIL (2022) *Safety car: Le proposte della fiom per una transizione giusta per l'occupazione e i salari*. Available at: https://www.fiom-cgil.it/net/attachments/article/9091/22_01_13-safety_car_documento_fiom.pdf (Accessed: 25 January 2024).

FIOM-CGIL (2023a) *Automotive: non bastano i buoni propositi dell'accordo Mimit-Anfia*. Available at: https://www.fiom-cgil.it/net/attachments/article/10631/CS%20UNITARIO%20Automotive%2018.10.23.pdf (Accessed: 26 March 2024).

FIOM-CGIL (2023b) *Lo Stato investa nella nuova mobilità*. Available at: https://www.fiom-cgil.it/net/comunicazione/zoom/10291-lo-stato-investa-nella-nuova-mobilita (Accessed: 26 January 2024).

FIOM-CGIL (2024a) *Automotive. De Palma (Fiom): sciopero unitario a Torino è decisione straordinaria, subito tavolo a Palazzo Chigi*. Available at: https://www.fiom-cgil.it/net/attachments/article/10981/CS%20SCIOPERO%20AUTOMOTIVE%20TORINO%201%20MARZO%202024.pdf (Accessed: 26 March 2024).

FIOM-CGIL (2024b) *Automotive. Lodi-Oreggia (Fiom): incentivare la domanda con gli ecobonus deve essere atto finale di politica industriale che salvaguardi produzioni e occupazione*. Available at: https://www.fiom-cgil.it/net/attachments/article/10886/CS%20AUTOMOTIVE%201%20FEBBRAIO%202024.pdf (Accessed: 26 March 2024).

FO Métaux (2023) *Proposition Auto*. Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments (Accessed: 19 December 2023).

Fornovo, L. (2024) 'Auto, Stellantis e i sindacati siglano l'accordo per le uscite volontarie', *La Stampa*. 22 March Available at: https://www.lastampa.it/economia/2024/03/22/news/auto_stellantis_e_i_sindacati_siglano_laccordo_per_le_uscite_volontarie-14167185/ (Accessed: 10 April 2024).

Fraioli, L. (2024) 'Il no di Pichetto Fratin allo stop Ue alle auto a combustione dal 2035', *la Repubblica*. 27 March. Available at: https://www.repubblica.it/green-and-blue/2024/03/27/news/mobilita_auto_elettriche_combustione_pichetto_fratin-422381765/ (Accessed: 9 April 2024).

Gaddi, M. (2024) *Italy – anatomy of a decline*. Brussels: ETUI. Available at: https://www.etui.org/sites/default/files/2024-03/08%20Italy%20-%20automotive%20employment.pdf.

Gumbrell-McCormick, R., Hyman, R. and Bernaciak, M. (2017) 'Trade unions in Europe: Challenges and responses', in S. Marino, J. Roosblad, and R. Penninx (eds) *Trade Unions and Migrant Workers*. Edward Elgar Publishing, pp. 90–114. Available at: https://doi.org/10.4337/9781788114080.00014.

Hall, P.A. and Soskice, D. (2001) 'An Introduction to Varieties of Capitalism', in *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*. Oxford: Oxford University Press. Available at: https://edisciplinas.usp.br/pluginfile.php/4410598/mod_resource/content/0/Peter%20A.%20Hall%2C%20David%20Soskice-Varieties%20of%20Capitalism_%20The%20Institutional%20Foundations%20of%20Comparative%20Advantage-Oxford%20University%20Press%2C%20USA%20%282001%29.pdf.

IG Metall (2020) *Klimaschutz: Das sind die Positionen der IG Metall*. Available at: https://www.igmetall.de/politik-und-gesellschaft/umwelt-und-energie/klimaschutz-das-sind-die-positionen-der-ig-metall (Accessed: 25 January 2024).

IG Metall (2023a) *Mobilitätsgipfel: Jörg Hofmann ruft Politik zu mehr Tempo auf*. Available at: https://www.igmetall.de/politik-und-gesellschaft/mobilitaetsgipfel-joerg-hofmann-ruft-politik-zu-mehr-tempo (Accessed: 25 January 2024).

IG Metall (2023b) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at: https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

IG Metall (2024) *Investitionsoffensive gegen Politikverdrossenheit und für Demokratie*. Available at: https://www.igmetall.de/presse/pressemitteilungen/investitionsoffensive-gegen-politikverdrossenheit-und-fuer (Accessed: 19 March 2024).

IG Metall and BUND (2021) *IG Metall und BUND fordern zügige Mobilitätswende mit klaren Perspektiven für die Beschäftig*. Available at: https://www.igmetall.de/presse/pressemitteilungen/ig-metall-und-bund-fordern-zuegige-mobilitaetswende (Accessed: 12 February 2024).

ILO (2016) *Guidelines for a just transition towards environmentally sustainable economies and societies for all*. Geneva: International Labour Organization. Available at: https://www.ilo.org/wcmsp5/groups/public/---ed_emp/---emp_ent/documents/publication/wcms_432859.pdf (Accessed: 19 February 2024).

IndustriAll (2021) *The EU's industrial policy framework: is it fit for 55? Trade unions' serious concerns about the implementation of the promised Just Transition*. Available at: https://news.industriall-europe.eu/Article/679 (Accessed: 19 February 2024).

International Energy Agency (2022) *The Role of Critical Minerals in Clean Energy Transitions*. Available at: https://iea.blob.core.windows.net/assets/ffd2a83b-8c30-4e9d-980a-52b6d9a86fdc/TheRoleofCriticalMineralsinCleanEnergyTransitions.pdf (Accessed: 15 April 2024)

IOE (2020) *Germany legislation on funds for training during the short-time work scheme duration*. Available at: https://industrialrelationsnews.ioe-emp.org/industrial-relations-and-labour-law-september-2020/news/article/germany-legislation-on-funds-for-training-during-the-short-time-work-scheme-duration (Accessed: 19 March 2024).

Just Transition Research Collaborative (2018) *Mapping Just Transition(s) to a Low-Carbon World*. United Nations Research Institute for Social Development. Available at: https://www.uncclearn.org/wp-content/uploads/library/report-jtrc-2018.pdf (Accessed: 21 February 2024).

Kalt, T. (2022) 'Agents of transition or defenders of the status quo? Trade union strategies in green transitions', *Journal of Industrial Relations*, 64(4), pp. 499–521. Available at: https://doi.org/10.1177/00221856211051794.

Lechowski, G., Krzywdzinski, M. and Pardi, T. (2023) 'A government-driven sectoral transformation? French and German policy responses to the COVID-crisis in the automotive industry', *International Journal of Automotive Technology and Management*, 23(1), pp. 5–21. Available at: https://doi.org/10.1504/IJATM.2023.10052332.

Lehndorff, S. (2024) *Socio-ecological transformation of German Industry: Challenges, Actors, Strategies, and Conflicts*. Brussels: transform!. Available at: https://transform-

network.net/wp-content/uploads/2024/02/Socio-Ecological-Transformation-of-German-Industry_EN_kompr.pdf.

Leonardi, S. and Pedersini, R. (2023) 'Chapter 16 Trade unions in Italy: Pluralism and resilience', in *Trade unions in the European Union: Picking up the pieces of the neoliberal challenge*. Brussels: ETUI, pp. 625–660. Available at: https://www.etui.org/sites/default/files/2023-06/Chapter16_Italy_Pluralism%20and%20resilience_2023.pdf.

MarketScreener (2023) *IG Metall urges cheaper e-cars from German production*. Available at: https://uk.marketscreener.com/quote/stock/PORSCHE-AUTOMOBIL-HOLDING-3938612/news/IG-Metall-urges-cheaper-e-cars-from-German-production-44926549/ (Accessed: 25 January 2024).

Ministère de l'économie, des finances et de la souveraineté industrielle et numérique (2020) *Plan de soutien à l'automobile*. Available at: https://www.economie.gouv.fr/files/files/directions_services/covid19-soutien-entreprises/DP-Plan_soutien_automobile26052020.pdf (Accessed: 19 January 2024).

Ministère de l'économie, des finances et de la souveraineté industrielle et numérique (2023) *France 2030: plan de soutien à la filière automobile*. Available at: https://www.economie.gouv.fr/france-2030-plan-soutien-filiere-automobile (Accessed: 19 January 2024).

Ministero dell'Ambiente e della Sicurezza Energetica (2023) *Piano nazionale integrato per il clima*. Rome: Ministero dell'Ambiente e della Sicurezza Energetica. Available at: https://www.mase.gov.it/sites/default/files/PNIEC_2023.pdf (Accessed: 30 January 2024).

Ministero delle Imprese e del Made in Italy (2024) *Mimit, presentato al Tavolo Automotive il nuovo piano Ecobonus per l'anno 2024*. Available at: https://www.mimit.gov.it/it/notizie-stampa/mimit-presentato-al-tavolo-automotive-il-nuovo-piano-ecobonus-per-lanno-2024 (Accessed: 27 March 2024).

Müller, T. and Schulten, T. (2023) 'Chapter 12 Germany: Different worlds of trade unionism', in *Trade unions in the European Union: Picking up the pieces of the neoliberal challenge*. Brussels: ETUI, pp. 459–502. Available at: https://www.etui.org/sites/default/files/2023-06/Chapter12_Germany_Different%20worlds%20of%20trade%20unions_2023.pdf.

OICA (2023) *Car production by country 2022*. Available at: https://www-statista-com.acces-distant.sciencespo.fr/statistics/226032/light-vehicle-producing-countries/ (Accessed: 19 March 2024).

Pardi, T. (2023) 'Chapter 1. A European perspective of a fast-track transition to electromobility', in *On the way to electromobility – a green(er) but more unequal*

future? Brussels: ETUI, pp. 21-72 Available at: https://policycommons.net/artifacts/3754108/on-the-way-to-electromobility/4559592/.

Rehfeldt, U. and Vincent, C. (2023) 'Chapter 11 France: Fragmented trade unions, few members, but many voters and much social unrest', in *Trade unions in the European Union: Picking up the pieces of the neoliberal challenge*. Brussels: ETUI, pp. 421–457. Available at: https://www.etui.org/sites/default/files/2023-06/Chapter11_France_Fragmented%20trade%20unions%2C%20few%20members%2C%20but%20many%20voters%20and%20much%20social%20unrest_2023.pdf.

République Française (2021) *Les émissions de gaz à effet de serre du secteur des transports*. Available at: http://www.notre-environnement.gouv.fr/themes/climat/les-emissions-de-gaz-a-effet-de-serre-et-l-empreinte-carbone-ressources/article/les-emissions-de-gaz-a-effet-de-serre-du-secteur-des-transports (Accessed: 29 January 2024).

Rodríguez Contreras, R. et al. (2020) *Industrial relations: developments 2015–2019. Eurofund*. Publications Office of the European Union. Available at: https://data.europa.eu/doi/10.2806/994718 (Accessed: 7 March 2024).

Schmidt, V.A. (2012) 'What Happened to the State-Influenced Market Economies (SMEs)? France, Italy, and Spain Confront the Crisis as the Good, the Bad, and the Ugly', in W. Grant and G.K. Wilson (eds) *The Consequences of the Global Financial Crisis: The Rhetoric of Reform and Regulation*. Oxford: Oxford University Press, pp. 156–186. Available at: https://doi.org/10.1093/acprof:oso/9780199641987.003.0009.

Thomas, A. and Doerflinger, N. (2020) 'Trade union strategies on climate change mitigation: Between opposition, hedging and support', *European Journal of Industrial Relations*, 26(4), pp. 383–399. Available at: https://doi.org/10.1177/0959680120951700.

Ueckerdt, F. *et al.* (2021) 'Potential and risks of hydrogen-based e-fuels in climate change mitigation', *Nature Climate Change*, 11(5), pp. 384–393. Available at: https://doi.org/10.1038/s41558-021-01032-7.

UILM (2022) *La transizione ecologica e la decarbonizzazione nel settore metalmeccanico*. Available at: https://www.uilmnazionale.it/17congressonazionaleuilm/wp-content/uploads/2022/09/UILM_report.pdf (Accessed: 13 February 2024).

UILM (2023) *La sfida dell'elettrico nel settore dell'auto si può vincere*. Available at: https://www.uilmnazionale.it/fabbricasocieta/2023/02/24/la-sfida-dellelettrico-nel-settore-dellauto-si-puo-vincere/ (Accessed: 27 January 2024).

UILM (2024) *Governo passi dalla polemica al sostegno delle richieste sindacali verso Stellantis*. Available at: https://www.uilmnazionale.it/fabbricasocieta/2024/02/09/governo-passi-dalla-mera-polemica-al-sostegno-delle-richieste-sindacali-verso-stellantis/ (Accessed: 25 March 2024).

Verma, S., Dwivedi, G. and Verma, P. (2022) ‘Life cycle assessment of electric vehicles in comparison to combustion engine vehicles: A review’, *Materials Today: Proceedings*, 49, pp. 217–222. Available at: https://doi.org/10.1016/j.matpr.2021.01.666.

Wettengel, J. (2024) ‘Germany’s shift to electric cars slows down in 2023 as subsidies axed’, *Clean Energy Wire*, 8 January. Available at: https://www.cleanenergywire.org/news/germanys-shift-electric-cars-slows-down-2023-subsidies-axed (Accessed: 28 February 2024).

Appendix

List of interviews

DE01: IG Metall representative
IT01: FIOM-CGIL representative
IT02: CGIL representative
IT03: UILM representative
FR01: CGT Métallurgie representative
FR02: CFDT Métallurgie representative
FR03: FO Métaux representative

Figure 1: Industrial relations regimes or arrangements (Source: European Commission, Directorate-General for Employment, Social Affairs and Inclusion, 2009, p. 49)[i]

	North	Centre-west	South	West	Centre-east
Production regime	Coordinated market economy		Statist market economy	Liberal market economy	Statist or liberal?
Welfare regime	Universalistic	Segmented (status-oriented, corporatist)		Residual	Segmented or residual?
Employment regime	Inclusive	Dualistic		Liberal	
Industrial relations regime	Organised corporatism	Social partnership	Polarised/state-centred	Liberal pluralism	Fragmented/state-centred
Power balance	Labour-oriented	Balanced	Alternating	Employer-oriented	
Principal level of bargaining	Sector		Variable/unstable	Company	
Bargaining style	Integrating		Conflict oriented		Acquiescent
Role of SP in public policy	Institutionalised		Irregular/politicised	Rare/event-driven	Irregular/politicised
Role of the state in IR	Limited (mediator)	'Shadow of hierarchy"	Frequent intervention	Non-intervention	Organiser of transition
Employee representation	Union based/high coverage	dual system/high coverage	Variable (*)	Union based/small coverage	Union based/small coverage
Countries	Denmark Finland Norway Sweden	Belgium Germany (Ireland) Luxembourg Netherlands Austria Slovenia (Finland)	Greece Spain France Italy (Hungary) Portugal	Ireland Malta Cyprus UK	Bulgaria Czech Republic Estonia Latvia Lithuania Hungary Poland Romania Slovakia

Table A: Main features of the national automotive industry

	Germany	**France**	**Italy**
Share of the total manufacturing employment[ii]	11%	7.2%	4.6%
Turnover in 2020 in million €[iii]	470,005.5	119,601.8	60,797.4
Number of cars produced in 2021[iv]	3,332,609	950,188	486,111

Position in the EU market[v]	High core	Core	Core
Main domestic OEMs	Audi, BMW, Mercedes Benz, Porsche, Volkswagen[vi]	Renault PSA (now part of Stellantis)[vii]	Fiat (now part of Stellantis)[viii]

Table B: Industrial strategies for the decarbonisation of the automotive industry

	Germany	**France**	**Italy**
Investments	€6 billion between 2023-2026: new investments, research projects, battery ecosystems, EVs subsidies, charging infrastructure[ix] BUT cut in November 2023[x] €902 million for Northvolt gigafactory[xi]	€8 billion for supporting the automotive value chain: subcontractors, gigafactories, charging infrastructure and EV subsidies[xii] €5 billion loan to Renault [xiii]	€8.7 billion by 2030 -750 million for development and innovation contracts[xiv] -950 million for EVs[xv] - Termoli gigafactory Additional measures as part of NRRP and Industry 5.0[xvi]
EVs subsidies	Umwelt Bonus from 2016, but stopped in December 2023[xvii]	Bonus écologique[xviii]	Ecobonus: but support also to petrol cars[xix]
Social considerations	Reskilling programmes: -Work of Tomorrow Act: costs coverage of reskilling programmes[xx] -Qualification allowance[xxi] -Network for Advanced Formation[xxii]	Competences and metiers d'avenir (part of France 2030): €2.5 billion to finance reskilling programmes[xxiii] Multi-stakeholder platform on reskilling: monfuturnjobauto.fr	n.a.
Governance	-Autogipfel (during Covid-19)[xxiv] -Alliance Future of Industry: development	Platform Filière Automobile: development industrial strategy, unpaired	Tavolo Automotive: 5 working groups with the participation of the

	of the automotive industrial strategy, paired governance [xxv]	governance[xxvi] -Contract Stratégie de Filière 2018-2022[xxvii] -Contract Stratégie de Filière 2023-2027 (not yet published)	Ministry of Labour, ANFIA, trade unions (only consultative), regions and Stellantis[xxviii]

Table C: Trade unions' strategies for the decarbonisation of the automotive industry

		Germany	**France**	**Italy**
Trade union(s)		IG Metall	1) CGT Métallurgie 2) CFDT Métallurgie 3) FO Métaux	1) CGIL-FIOM 2) CISL-FIM 3) UIL-UILM
Decarbonisation strategy	**Alternative fuels (hybrid vehicles)**	No[xxix]	1) Yes[xxx] 2) Yes[xxxi] 3) Yes[xxxii]	1) No[xxxiii] 2) No[xxxiv] 3) Yes[xxxv]
	Support for electric vehicles	Yes[xxxvi]	1) Yes, but small[xxxvii] 2) Yes, but small[xxxviii] 3) Yes, but small and later than 2035[xxxix]	1) Yes[xl] 2) N.a. 3) N.a.
	Sobriety	Intermodality[xli]	1) Yes, but strong role of the car[xlii] 2) Yes: intermodality, degrowth[xliii] 3) N.a.	1) Yes[xliv], but focus on car 2) N.a. 3) N.a.
Type of just transition	**Reskilling**	State and private support for reskilling[xlv]	1) Yes: state support[xlvi] 2) Yes: several initiatives[xlvii] 3) Yes: several initiatives[xlviii]	1) Yes: new skilling tools[xlix] 2) Yes[l] 3) Yes: analysis of the skill impacts[li]

	Social protection	Yes[lii]	1) - 2) - 3) Importance of working conditions[liii]	1) Yes: cassa integrazione and other measures[liv] 2) Working time reduction[lv] 3) Working time reduction[lvi]
	Participation	-Creation of and participation in 'Regional transformation councils'[lvii] -Co-determination at the company level[lviii] -Future collective agreements[lix]	1) Workers' and citizens' mobilisation at the European level[lx] 2) Individual and collective tools[lxi] 3) Etats Generaux[lxii]	1) National tables (automotive, but not only)[lxiii] 2) National level[lxiv] 3) National level[lxv]
Role of the State	**As a regulator**	Yes[lxvi] -Clear industrial policy: raw materials, semiconductors, batteries. -Binding public funding to clear social, employment policy and ecological criteria -Active structural regional policy -Expansion of co-determination rights (democracy at work) -Collective bargaining	1) Relocation: direct intervention in planning the transition[lxvii] 2) Coordinated industrial policy, eco-social conditionalities for public funds and clear norms on the level of emissions of vehicles and batteries[lxviii] 3) Relocation: coordination at the EU level[lxix]	1) Clear industrial strategy[lxx] 2) Clear industrial strategy[lxxi] 3) Clear industrial strategy[lxxii]

	As an investor	Yes[lxxiii] -Infrastructural change for supporting the mobility transition: public transport, charging infrastructure -Promotion of private investments - Welfare State[lxxiv]	1) Gigafactory[lxxv] 2) Public funds[lxxvi] 3) R&D for battery ecosystem, gigafactories [lxxvii]	1) Public funds with strong location conditionalities [lxxviii] 2) - 3) Public funds to support companies' investments[lxxix]
Additional elements	**Car model**	Critical to electric premium vehicles[lxxx]	1) Segment B[lxxxi] 2) Lighter vehicle[lxxxii] 3) Segment B[lxxxiii]	1) Mass market, not premium[lxxxiv] 2) - 3) Premium and mass-market[lxxxv]
	EVs subsidies	EVs subsidies[lxxxvi]	1) - 2) - 3) -	1) Yes, but main focus on production 2) Yes[lxxxvii] 3) Yes[lxxxviii]
	Energy transition	Fundamental shift to renewable energy[lxxxix]	1) - 2) Yes[xc] 3) Yes, also nuclear[xci]	1) - 2) Yes: problem of the high cost of energy[xcii] 3) -
	Extra	-Collaboration with other trade unions[xciii] -The decrease in the financial support is highly problematic[xciv]	1) European coordination 2) Inclusion of CFDT report in "Contract Stratégie de Filière 2023-2027"[xcv] 3) National and European planification[xcvi]	1) Gap between Stellantis profits and employment levels in Italy and need for tables for all the sectors to manage the transition systematically[xcvii] 2) - 3)Uncertain future because EU elections could lead to a postpone of the ban[xcviii]

[i] European Commission, Directorate-General for Employment, Social Affairs and Inclusion (2009) *Industrial relations in Europe 2008*. Publications Office. Available at: https://data.europa.eu/doi/10.2767/54876 (Accessed: 19 December 2023).

[ii] ACEA (2023) *Pocket Guide 2023-2024*. Brussels: ACEA. Available at: https://www.acea.auto/files/ACEA-Pocket-Guide-2023-2024.pdf (Accessed: 2 December 2023).

[iii] Eurostat (2024) *Revenue of motor vehicle and trailer manufacturing in the European Union in 2020, by major country (in million euros) [Graph]*. Available at: https://www-statista-com.acces-distant.sciencespo.fr/statistics/1128436/europe-motor-vehicle-and-trailer-revenue-by-country/ (Accessed: 19 March 2024).

[iv] ACEA (2023) *Pocket Guide 2023-2024*. Brussels: ACEA. Available at: https://www.acea.auto/files/ACEA-Pocket-Guide-2023-2024.pdf (Accessed: 2 December 2023).

[v] Pavlínek, P. (2022) 'Relative positions of countries in the core-periphery structure of the European automotive industry', *European Urban and Regional Studies*, 29(1), pp. 59–84. Available at: https://doi.org/10.1177/09697764211021882.

[vi] Boewe, J. and Schulten, J. (2024) *Resilient or vulnerable? The double transformation of the German automotive industry and the consequences for employment*. Brussels: ETUI. Available at: https://www.etui.org/sites/default/files/2024-03/06%20Germany-Automotive-Employment-trends.pdf.

[vii] Carbonell, J.S. and Pardi, T. (2024) *Can electrification reverse the decline? The French automotive industry and the green transition*. Brussels: ETUI. Available at: https://www.etui.org/sites/default/files/2024-03/03%20France%20-%20automotive%20manufacturers%20and%20the%20green%20transition.pdf.

[viii] Gaddi, M. (2024) *Italy – anatomy of a decline*. Brussels: ETUI. Available at: https://www.etui.org/sites/default/files/2024-03/08%20Italy%20-%20automotive%20employment.pdf.

[ix] Federal Ministry for Economic Affairs and Climate Protection (2023) *Industrial policy at the turn of the century: securing an industrial location, renewing prosperity, strengthen economic security*. Berlin: Federal Ministry for Economic Affairs and Climate Protection. Available at: https://www.bmwk.de/Redaktion/DE/Publikationen/Industrie/industriepolitik-in-der-zeitenwende.pdf?__blob=publicationFile&v=16.

[x] Lehndorff, S. (2024) *Socio-ecological transformation of German Industry: Challenges, Actors, Strategies, and Conflicts*. Brussels: transform!. Available at: https://transform-network.net/wp-content/uploads/2024/02/Socio-Ecological-Transformation-of-German-Industry_EN_kompr.pdf.

[xi] European Commission (2024) *€902 million German State aid measure to support Northvolt*. Available at: https://ec.europa.eu/commission/presscorner/detail/en/ip_23_6823 (Accessed: 19 March 2024).

[xii] Ministère de l'économie, des finances et de la souveraineté industrielle et numérique (2020) *Plan de soutien à l'automobile*. Available at: https://www.economie.gouv.fr/files/files/directions_services/covid19-soutien-entreprises/DP-Plan_soutien_automobile26052020.pdf (Accessed: 19 January 2024).

[xiii] Ministère de l'économie, des finances et de la souveraineté industrielle et numérique (2020) *Plan de soutien à l'automobile*. Available at: https://www.economie.gouv.fr/files/files/directions_services/covid19-soutien-entreprises/DP-Plan_soutien_automobile26052020.pdf (Accessed: 19 January 2024).

[xiv] Ministero delle Imprese e del Made in Italy (2022) *Automotive: incentivi per sviluppo della filiera*. Available at: https://www.mimit.gov.it/it/notizie-stampa/automotive-mise-al-via-gli-incentivi-per-sviluppo-della-filiera (Accessed: 30 January 2024).

[xv] Ministero delle Imprese e del Made in Italy (2024) *Mimit, presentato al Tavolo Automotive il nuovo piano Ecobonus per l'anno 2024*. Available at: https://www.mimit.gov.it/it/notizie-stampa/mimit-presentato-al-tavolo-automotive-il-nuovo-piano-ecobonus-per-lanno-2024 (Accessed: 27 March 2024)

[xvi] Interview with IT01

[xvii] Wettengel, J. (2024) 'Germany's shift to electric cars slows down in 2023 as subsidies axed', *Clean Energy Wire*, 8 January. Available at: https://www.cleanenergywire.org/news/germanys-shift-electric-cars-slows-down-2023-subsidies-axed (Accessed: 28 February 2024).

[xviii] Ministère de l'économie, des finances et de la souveraineté industrielle et numérique (2020) *Plan de soutien à l'automobile*. Available at: https://www.economie.gouv.fr/files/files/directions_services/covid19-soutien-entreprises/DP-Plan_soutien_automobile26052020.pdf (Accessed: 19 January 2024).

[xix] Ministero delle Imprese e del Made in Italy (2024) *Mimit, presentato al Tavolo Automotive il nuovo piano Ecobonus per l'anno 2024*. Available at: https://www.mimit.gov.it/it/notizie-stampa/mimit-presentato-al-tavolo-automotive-il-nuovo-piano-ecobonus-per-lanno-2024 (Accessed: 27 March 2024).

[xx] IOE (2020) *Germany legislation on funds for training during the short-time work scheme duration*. Available at:https://industrialrelationsnews.ioe-emp.org/industrial-relations-and-labour-law-september-2020/news/article/germany-legislation-on-funds-for-training-during-the-short-time-work-scheme-duration (Accessed: 19 March 2024).

[xxi] Federal Ministry for Economic Affairs and Climate Protection (2023) *Industrial policy at the turn of the century: securing an industrial location, renewing prosperity, strengthen economic security*. Berlin: Federal Ministry for Economic Affairs and Climate Protection. Available at: https://www.bmwk.de/Redaktion/DE/Publikationen/Industrie/industriepolitik-in-der-zeitenwende.pdf?__blob=publicationFile&v=16.

[xxii] Beltrametti, L. *et al.* (2023) *Automotive - Uno scenario regonale. Studio comparativo delle politiche industriali nelle economie automotive di maggior prossimità all'Italia*. Osservatorio Nazionale Automotive. Available at: https://www.anfia.it/allegati_contenuti/DOC/323_STUDIO%20OSSERVATORIO%20AUTOMOTIVE_BENCHMARK%20INTERNAZIONALE%202023.PDF (Accessed: 26 January 2024).

[xxiii] Ministère de l'économie, des finances et de la souveraineté industrielle et numérique (2020) *Plan de soutien à l'automobile*. Available at: https://www.economie.gouv.fr/files/files/directions_services/covid19-soutien-entreprises/DP-Plan_soutien_automobile26052020.pdf (Accessed: 19 January 2024).

[xxiv] Lechowski, G., Krzywdzinski, M. and Pardi, T. (2023) 'A government-driven sectoral transformation? French and German policy responses to the COVID-crisis in the automotive industry', *International Journal of Automotive Technology and Management*, 23(1), pp. 5–21. Available at: https://doi.org/10.1504/IJATM.2023.10052332.

Lechowski, G., Krzywdzinski, M. and Pardi, T. (2023) 'A government-driven sectoral transformation? French and German policy responses to the COVID-crisis in the automotive industry', *International Journal of Automotive Technology and Management*, 23(1), pp. 5–21. Available at: https://doi.org/10.1504/IJATM.2023.10052332.

[xxv] Federal Ministry for Economic Affairs and Climate Action (2024) *Joining forces to strengthen German industry*. Available at: https://www.bmwk.de/Redaktion/EN/Dossier/joining-forces-to-strengthen-german-industry.html (Accessed: 28 February 2024).

[xxvi] PFA (2024) *Plateforme automobile*. Available at: https://pfa-auto.fr/ (Accessed: 21 March 2024).

[xxvii] Conseil national de l'industrie (2018) *Contrat stratégique de la filière Automobile 2018-2022*. Available at: https://pfa-auto.fr/wp-content/uploads/2018/09/DP-SCF-Automobile.pdf (Accessed: 21 March 2024).

PFA (2021) *Avenant au contrat stratégique de la filière automobile 2018-2022*. Available at: https://pfa-auto.fr/wp-content/uploads/2021/04/Avenant-CSF-Auto-avril-2021-1.pdf (Accessed: 21 March 2024).

[xxviii] Ministero delle Imprese e del Made in Italy (2024) *Mimit, convocato il Tavolo Automotive sul nuovo Piano incentivi*. Available at: https://www.mimit.gov.it/it/notizie-stampa/mimit-convocato-il-tavolo-automotive-sul-nuovo-piano-incentivi (Accessed: 25 March 2024).

[xxix] IG Metall (2023) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at:https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

[xxx] CGT Métallurgie (2021) *Propositions CGT pour l'automobile*. Available at: https://www.cgt.fr/sites/default/files/2021-02/COMPIL_FICHES_AUTO.pdf (Accessed: 25 January 2024).

CGT Métallurgie (2023) *Droit à la mobilité durable pour tous*. Available at: https://ftm-cgt.fr/wp-content/uploads/2023/04/4-pages-Forum-automobile.pdf (Accessed: 19 December 2023).

[xxxi] CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?* Available at: https://www.cfdt.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 January 2024).

[xxxii] FO Métaux (2023) *L'AUTO DOIT RESTER MOBILE*. Available at: https://www.fo-metaux.org/articles/lauto-doit-rester-mobile (Accessed: 22 March 2024).

FO Métaux (2023) *Proposition Auto*. Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments.

[xxxiii] Piscitelli, L.M. (2022) 'Auto, il "tutto elettrico" al 2035 spacca anche i sindacati', *Il Foglio*, 9 June. Available at: https://www.ilfoglio.it/politica/2022/06/09/news/auto-il-tutto-elettrico-al-2035-spacca-anche-i-sindacati-4092027/ (Accessed: 26 January 2024).

[xxxiv] Piscitelli, L.M. (2022) 'Auto, il "tutto elettrico" al 2035 spacca anche i sindacati', *Il Foglio*, 9 June. Available at: https://www.ilfoglio.it/politica/2022/06/09/news/auto-il-tutto-elettrico-al-2035-spacca-anche-i-sindacati-4092027/ (Accessed: 26 January 2024).

[xxxv] Piscitelli, L.M. (2022) 'Auto, il "tutto elettrico" al 2035 spacca anche i sindacati', *Il Foglio*, 9 June. Available at: https://www.ilfoglio.it/politica/2022/06/09/news/auto-il-tutto-elettrico-al-2035-spacca-anche-i-sindacati-4092027/ (Accessed: 26 January 2024).

[xxxvi] IG Metall (2023) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at:https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

[xxxvii]CGT Métallurgie (2021) *Propositions CGT pour l'automobile*. Available at: https://www.cgt.fr/sites/default/files/2021-02/COMPIL_FICHES_AUTO.pdf (Accessed: 25 January 2024).

CGT Métallurgie (2023) *Droit à la mobilité durable pour tous*. Available at: https://ftm-cgt.fr/wp-content/uploads/2023/04/4-pages-Forum-automobile.pdf (Accessed: 19 December 2023).

[xxxviii] CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?* Available at: https://www.cfdt.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 Januay 2024).

[xxxix] FO Métaux (2023) *L'AUTO DOIT RESTER MOBILE*. Available at: https://www.fo-metaux.org/articles/lauto-doit-rester-mobile (Accessed: 22 March 2024).

FO Métaux (2023) *Proposition Auto*. Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments

[xl] FIOM-CGIL (2022) *Safety car: Le proposte della fiom per una transizione giusta per l'occupazione e i salari*. Available at: https://www.fiom-cgil.it/net/attachments/article/9091/22_01_13-safety_car_documento_fiom.pdf.

[xli]Bündnis sozialverträgliche Mobilitätswende (2021) *Wie wir das Klima schützen und eine sozial gerechte Mobilitätswende umsetzen können*. Available at: https://www.bund.net/fileadmin/user_upload_bund/publikationen/mobilitaet/mobilitaet_Buendnis_sozialvertraegliche_Mobilitaetswende_Broschuere_.pdf.

IG Metall (2023) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at: https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

IG Metall and BUND (2021) *IG Metall und BUND fordern zügige Mobilitätswende mit klaren Perspektiven für die Beschäftig*. Available at: https://www.igmetall.de/presse/pressemitteilungen/ig-metall-und-bund-fordern-zuegige-mobilitaetswende (Accessed: 12 February 2024).

Jacobin (2020) *In Germany, Trade Unions Are Waking Up To the Climate Crisis*. Available at: https://jacobin.com/2020/11/germany-trade-unions-climate-crisis-ig-metall (Accessed: 24 January 2024).

[xlii] CGT Métallurgie (2023) *Droit à la mobilité durable pour tous*. Available at: https://ftm-cgt.fr/wp-content/uploads/2023/04/4-pages-Forum-automobile.pdf (Accessed: 19 December 2023).

[xliii] CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?* Available at: https://www.cfdt.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 January 2024).

[xliv] Alleanza Clima Lavoro (2023) *Un'Alleanza per la mobilità sostenibile e la giusta transizione*. Rome: Alleanza Clima Lavoro. Available at: https://sbilanciamoci.info/wp-content/uploads/2023/07/ACL_A5_impaginato_web.pdf (Accessed: 5 March 2024).

[xlv] IG Metall (2023) *Mobilitätsgipfel: Jörg Hofmann ruft Politik zu mehr Tempo auf*. Available at: https://www.igmetall.de/politik-und-gesellschaft/mobilitaetsgipfel-joerg-hofmann-ruft-politik-zu-mehr-tempo (Accessed: 25 January 2024).

[xlvi] CGT Métallurgie (2023) *Compte Rendu: Forum de l'automobile 23 mai 2023 à Montreuil*. Available at: https://ftm-cgt.fr/wp-content/uploads/2023/12/compte-rendu-forum-auto-vf-1-_compressed-1.pdf (Accessed: 19 December 2023).

[xlvii] CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?* Available at: https://www.cfdt.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 January 2024).

[xlviii] FO Métaux (2023) *Proposition Auto*. Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments.

[xlix] FIOM-CGIL (2022) *Safety car: Le proposte della fiom per una transizione giusta per l'occupazione e i salari*. Available at: https://www.fiom-cgil.it/net/attachments/article/9091/22_01_13-safety_car_documento_fiom.pdf.

[l] FIM-CISL (2024) *Stellantis: Gruppo strategico per occupazione ed economia del Paese. La polemica politica non fa crescere le produzioni né difende l'occupazione*. Available at: https://www.fim-cisl.it/wp-content/uploads/2024/01/Stellantis-UlianoFim-Cislgruppo-strategico-per-occupazione-ed-economia-del-Paese.pdf (Accessed: 5 March 2024).

[li] UILM (2022) *La transizione ecologica e la decarbonizzazione nel settore metalmeccanico*. Available at: https://www.uilmnazionale.it/17congressonazionaleuilm/wp-content/uploads/2022/09/UILM_report.pdf (Accessed: 13 February 2024).

[lii] IG Metall (2023) *Mobilitätsgipfel: Jörg Hofmann ruft Politik zu mehr Tempo auf*. Available at: https://www.igmetall.de/politik-und-gesellschaft/mobilitaetsgipfel-joerg-hofmann-ruft-politik-zu-mehr-tempo (Accessed: 25 January 2024).

[liii] Interview with FR03

[liv] FIOM-CGIL (2022) *Safety car: Le proposte della fiom per una transizione giusta per l'occupazione e i salari*. Available at: https://www.fiom-cgil.it/net/attachments/article/9091/22_01_13-safety_car_documento_fiom.pdf.

[lv] FIM-CISL (2021) *Stellantis. Fim Cisl: "Positiva spinta su elettrico, ma le fabbriche di motori devo essere riconvertite per salvare occupazione e prospettive"*. Available at: https://www.cisl.it/notizie/categorie-ed-enti-cisl/stellantis-fim-cisl-positiva-spinta-su-elettrico-ma-le-fabbriche-di-motori-devo-essere-riconvertite-per-salvare-occupazione-e-prospettive/ (Accessed: 27 January 2024).

FIM-CISL (2024) *Stellantis: Gruppo strategico per occupazione ed economia del Paese. La polemica politica non fa crescere le produzioni né difende l'occupazione*. Available at: https://www.fim-cisl.it/wp-content/uploads/2024/01/Stellantis-UlianoFim-Cislgruppo-strategico-per-occupazione-ed-economia-del-Paese.pdf (Accessed: 5 March 2024).

[lvi] UILM (2023) *La sfida dell'elettrico nel settore dell'auto si può vincere*. Available at: https://www.uilmnazionale.it/fabbricasocieta/2023/02/24/la-sfida-dellelettrico-nel-settore-dellauto-si-puo-vincere/ (Accessed: 27 January 2024).

[lvii] IG Metall (2023) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at:https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

IG Metall and BUND (2021) *IG Metall und BUND fordern zügige Mobilitätswende mit klaren Perspektiven für die Beschäftig*. Available at: https://www.igmetall.de/presse/pressemitteilungen/ig-metall-und-bund-fordern-zuegige-mobilitaetswende (Accessed: 12 February 2024).

[lviii] IG Metall (2024) *Investitionsoffensive gegen Politikverdrossenheit und für Demokratie*. Available at: https://www.igmetall.de/presse/pressemitteilungen/investitionsoffensive-gegen-politikverdrossenheit-und-fuer (Accessed: 19 March 2024).

[lix] IG Metall (2023) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at:https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

[lx] CGT Métallurgie (2023) *Droit à la mobilité durable pour tous.* Available at: https://ftm-cgt.fr/wp-content/uploads/2023/04/4-pages-Forum-automobile.pdf (Accessed: 19 December 2023).

[lxi] CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?* Available at: https://www.cfdt.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 January 2024).

[lxii] FO Métaux (2023) *Proposition Auto*. Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments.

[lxiii] FIOM-CGIL (2022) *Safety car: Le proposte della fiom per una transizione giusta per l'occupazione e i salari*. Available at: https://www.fiom-cgil.it/net/attachments/article/9091/22_01_13-safety_car_documento_fiom.pdf.

[lxiv] FIM-CISL (2022) *Automotive: lo stop al motore endotermico richiede scelte industriali precise per garantire la sostenibilità sociale.* Available at: https://www.fim-cisl.it/wp-content/uploads/2022/06/Automotive-Uliano-Fim-Cisl-stop-al-motore-endotermicoora-scelte-industriali-precise.pdf (Accessed: 26 March 2024).

[lxv] UILM (2024) *Governo passi dalla polemica al sostegno delle richieste sindacali verso Stellantis*. Available at: https://www.uilmnazionale.it/fabbricasocieta/2024/02/09/governo-passi-dalla-mera-polemica-al-sostegno-delle-richieste-sindacali-verso-stellantis/ (Accessed: 25 March 2024).

[lxvi] IG Metall (2023) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Available at: https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

[lxvii] CGT Métallurgie (2023) *Compte Rendu: Forum de l'automobile 23 mai 2023 à Montreuil*. Available at: https://ftm-cgt.fr/wp-content/uploads/2023/12/compte-rendu-forum-auto-vf-1-_compressed-1.pdf (Accessed: 19 December 2023).

[lxviii] CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?* Available at: https://www.cfdt.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 January 2024).

[lxix] FO Métaux (2023) *Proposition Auto*. Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments.

[lxx] FIOM-CGIL (2022) *Safety car: Le proposte della fiom per una transizione giusta per l'occupazione e i salari*. Available at: https://www.fiom-cgil.it/net/attachments/article/9091/22_01_13-safety_car_documento_fiom.pdf.

Beltrametti, L. *et al.* (2023) *Automotive - Uno scenario regionale. Studio comparativo delle politiche industriali nelle economie automotive di maggior prossimità all'Italia*. Osservatorio Nazionale Automotive. Available at: https://www.anfia.it/allegati_contenuti/DOC/323_STUDIO%20OSSERVATORIO%20AUTOMOTIVE_BENCHMARK%20INTERNAZIONALE%202023.PDF (Accessed: 26 January 2024).

[lxxi] Beltrametti, L. *et al.* (2023) *Automotive - Uno scenario regionale. Studio comparativo delle politiche industriali nelle economie automotive di maggior prossimità all'Italia*. Osservatorio Nazionale Automotive. Available at: https://www.anfia.it/allegati_contenuti/DOC/323_STUDIO%20OSSERVATORIO%20AUTOMOTIVE_BENCHMARK%20INTERNAZIONALE%202023.PDF (Accessed: 26 January 2024).

[lxxii] Beltrametti, L. *et al.* (2023) *Automotive - Uno scenario regionale. Studio comparativo delle politiche industriali nelle economie automotive di maggior prossimità all'Italia*. Osservatorio Nazionale Automotive. Available at: https://www.anfia.it/allegati_contenuti/DOC/323_STUDIO%20OSSERVATORIO%20AUTOMOTIVE_BENCHMARK%20INTERNAZIONALE%202023.PDF (Accessed: 26 January 2024).

[lxxiii] IG Metall (2023) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at:https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

IG Metall (2023) *Mobilitätsgipfel: Jörg Hofmann ruft Politik zu mehr Tempo auf*. Available at: https://www.igmetall.de/politik-und-gesellschaft/mobilitaetsgipfel-joerg-hofmann-ruft-politik-zu-mehr-tempo (Accessed: 25 January 2024).

[lxxiv] IG Metall (2024) *Investitionsoffensive gegen Politikverdrossenheit und für Demokratie*. Available at: https://www.igmetall.de/presse/pressemitteilungen/investitionsoffensive-gegen-politikverdrossenheit-und-fuer (Accessed: 19 March 2024).

[lxxv] CGT Métallurgie (2021) *Propositions CGT pour l'automobile*. Available at: https://www.cgt.fr/sites/default/files/2021-02/COMPIL_FICHES_AUTO.pdf (Accessed: 25 January 2024).

[lxxvi] CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?* Available at: https://www.cfdt.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 January 2024).

[lxxvii] FO Métaux (2023) *Proposition Auto*. Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments.

[lxxviii] FIOM-CGIL (2022) *Automotive: Marinelli- Guglielmi (Fiom): bene lo stanziamento di fondi, ma assente una vera politica industriale*. Available at: https://www.fiom-cgil.it/net/attachments/article/9758/22_10_10-automotive.pdf (Accessed: 26 March 2024).

[lxxix] UILM (2024) *Governo passi dalla polemica al sostegno delle richieste sindacali verso Stellantis*. Available at: https://www.uilmnazionale.it/fabbricasocieta/2024/02/09/governo-passi-dalla-mera-polemica-al-sostegno-delle-richieste-sindacali-verso-stellantis/ (Accessed: 25 March 2024).

[lxxx] IG Metall (2023b) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at:https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

MarketScreener (2023) *IG Metall urges cheaper e-cars from German production*. Available at: https://uk.marketscreener.com/quote/stock/PORSCHE-AUTOMOBIL-HOLDING-3938612/news/IG-Metall-urges-cheaper-e-cars-from-German-production-44926549/ (Accessed: 25 January 2024).

[lxxxi] CGT Métallurgie (2021) *Propositions CGT pour l'automobile*. Available at: https://www.cgt.fr/sites/default/files/2021-02/COMPIL_FICHES_AUTO.pdf (Accessed: 25 January 2024).

CGT Métallurgie (2023) *Compte Rendu: Forum de l'automobile 23 mai 2023 à Montreuil*. Available at: https://ftm-cgt.fr/wp-content/uploads/2023/12/compte-rendu-forum-auto-vf-1-_compressed-1.pdf (Accessed: 19 December 2023).

[lxxxii] CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?* Available at: https://www.cfdt.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 January 2024).

[lxxxiii] FO Métaux (2023) *Proposition Auto*. Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments.

[lxxxiv] FIOM-CGIL (2023) *Lo Stato investa nella nuova mobilità*. Available at: https://www.fiom-cgil.it/net/comunicazione/zoom/10291-lo-stato-investa-nella-nuova-mobilita (Accessed: 26 January 2024).

[lxxxv] UILM (2024) *Governo passi dalla polemica al sostegno delle richieste sindacali verso Stellantis*. Available at: https://www.uilmnazionale.it/fabbricasocieta/2024/02/09/governo-passi-dalla-mera-polemica-al-sostegno-delle-richieste-sindacali-verso-stellantis/ (Accessed: 25 March 2024).

[lxxxvi] IG Metall (2023b) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at:https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

[lxxxvii] FIM-CISL (2024) *Stellantis: Gruppo strategico per occupazione ed economia del Paese. La polemica politica non fa crescere le produzioni né difende l'occupazione*. Available at: https://www.fim-cisl.it/wp-content/uploads/2024/01/Stellantis-UlianoFim-Cislgruppo-strategico-per-occupazione-ed-economia-del-Paese.pdf (Accessed: 5 March 2024)

[lxxxviii] UILM (2024) *Governo passi dalla polemica al sostegno delle richieste sindacali verso Stellantis*. Available at: https://www.uilmnazionale.it/fabbricasocieta/2024/02/09/governo-passi-dalla-mera-polemica-al-sostegno-delle-richieste-sindacali-verso-stellantis/ (Accessed: 25 March 2024).

[lxxxix] IG Metall (2023b) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at:https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

[xc] CFDT Métallurgie (2021) *Automobile: comme relever le défi d'une transition juste?* Available at: https://www.cfdtT.fr/upload/docs/application/pdf/2021-07/tt-rapport-automobile-juin-2021.pdf (Accessed: 26 January 2024).

[xci] FO Métaux (2023) *Proposition Auto*. Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments.

Interview with FR03

[xcii] FIM-CISL (2024) *Stellantis: Gruppo strategico per occupazione ed economia del Paese. La polemica politica non fa crescere le produzioni né difende l'occupazione*. Available at: https://www.fim-cisl.it/wp-content/uploads/2024/01/Stellantis-UlianoFim-Cislgruppo-strategico-per-occupazione-ed-economia-del-Paese.pdf (Accessed: 5 March 2024).

[xciii] IG Metall (2023) *Speed Matters - Weichen Fur Die Mobilitatswende Stellen*. Frankfurt: IG Metall. Available at:https://www.igmetall.de/download/20230627_IGM_Debattenpapier_zur_Mobilit_tswende_2023_4227a0d235410485d129c689f29244e5273a4001.pdf (Accessed: 28 February 2024).

[xciv] Interview with DE01.

[xcv] Interview with FR02

[xcvi] FO Métaux (2023) *Proposition Auto.* Available at: https://www.fo-metaux.org/resources/propositions-fo-metaux-pour-lautomobile/attachments.

[xcvii] Interview with IT01

[xcviii] Interview with IT03

Public Policy Master's Thesis Series

This series presents the Master's theses in Public Policy and in European Affairs of the Sciences Po School of Public Affairs. It aims to promote high-standard research master's theses, relying on interdisciplinary analyses and leading to evidence-based policy recommendations.

Trade unions' positions and roles for a just transition

The case of the automotive industry in France, Germany and Italy

Letizia Bombardieri

Abstract

Given the employment implications of the decarbonisation of the automotive industry in France, Germany and Italy, trade unions need to be actively involved to ensure a just transition. Our research aims to assess whether trade unions participate in the decision-making process and to what extent their positions are taken into account in national industrial policies. To do this, we map trade unions' positions on decarbonising the sector through interviews with union representatives and a review of their official websites. Secondly, we compare their strategies with national industrial policies. The cross-country comparison allows us to assess how existing industrial relations affect the ability of unions to influence industrial policies. The results show that the paired governance of German industry allows IG Metall's positions on a just transition to be more fully integrated into the industrial strategy. At the same time, IG Metall's participation in existing social dialogue initiatives limits the union's ability to pursue broader social and environmental transformations, such as its call for a mobility transition. Furthermore, despite the low level of trade union involvement in France and Italy, trade unions and national strategies partially align. However, this does not necessarily mean a positive outcome for trade unions. In conclusion, trade unions' involvement is necessary to promote a just transition and should be encouraged by the European Union. Such initiatives should take the form of cross-sectoral dialogues that allow for the possibility of creating stronger nature-labour alliances.

Key words

Just transition, social dialogue, industrial relations, automotive industry