BARMETAL

Digitalization, Automatization and Decarbonization: Opportunity for Strengthening Collective Bargaining in the Metal Sector

France Policy Report

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Introduction

This report is meant to assess the status and evolution of the processes of **digitalisation, automation and decarbonisation, call it synthetically DAD (digitalisation-automation-decarbonisation), in the Italian automotive industry**. The ultimate scope of the report is to assess the effects of the DAD process for bargaining and social dialogue. In that, the primary interest of this research is on the effects that DAD are exercising upon workers, trade unions and their bargaining processes.

The analysis of the three processes altogether derives from the fact that the industry is at the same time crossed by a preceding wave of automation and digitalisation, the so called Industry 4.0 phase started approximately in 2016-2017 and still unfolding, more recently coupled with the so called decarbonisation phase, also pushed by the growing concerns about the climate crisis. The combination of such transformations ultimately have led the industry toward a deep reconfiguration in terms of actors and value chain articulations, products, and production processes. As such, the three forces might be interlinked among them, pushing toward a unique pattern of rearticulation of the industry, or, alternatively, exercising different pressures and tensions, according to the actors involved, the role and position of the country under study in the value chain generation and distribution, the status of advancement and implementation of regulations. The effects might also reverberate from macro to micro levels, and are deeply shaped by the institutional conditions of the country under study. Therefore, to assess the unfolding of the effects of DAD it is important to distinguish some realms of investigation which might help us in defining the arenas, and together the boundaries, of such transitions.

In this report, we identify the following areas of analysis: labour market trends and conditions before the advent of DAD with reference to the automotive sector (Section 1), particularly looking at the process of deindustrialisation of the Southern Europe and the process of industrialisation of the Eastern Europe; the conditions and evolutions of the industrial relation systems (Section 2), the articulation of DAD at the macro level in the institutional agenda (Section 3), at the industry level (Section 4), and at the workplace level to spot DAD “at work” (Section 5).

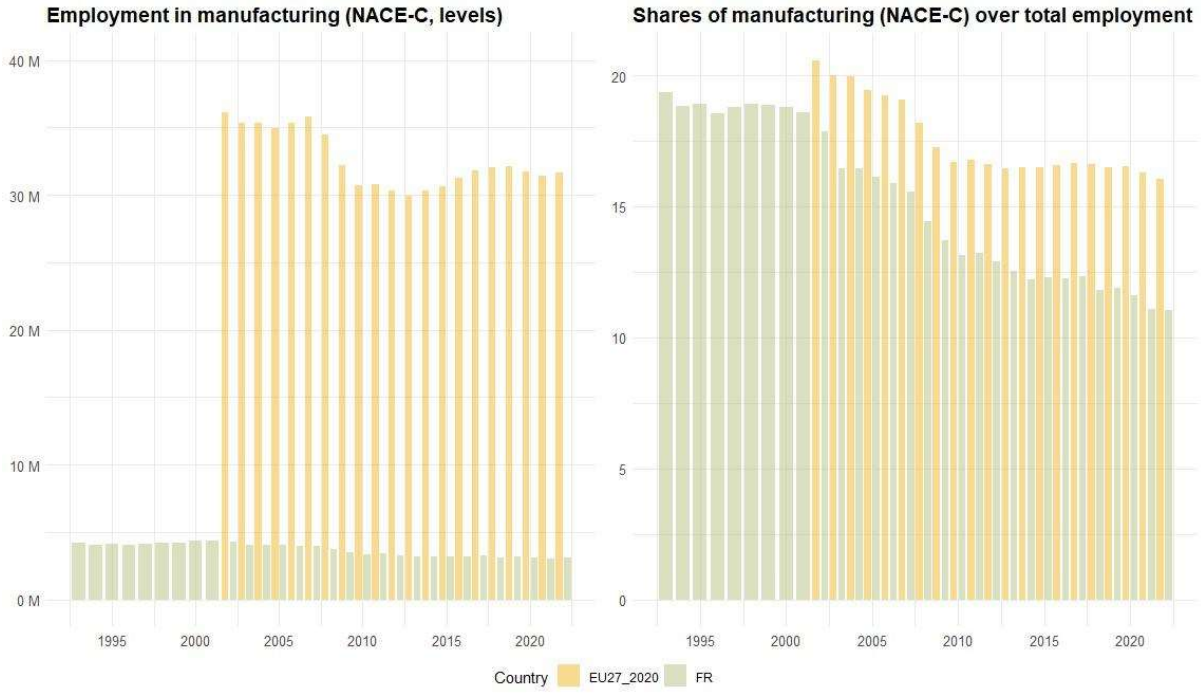
Given that the ultimate outcome of the report is to understand the extent to which social dialogue, in its diverse forms of implementation, is currently invested by new agenda settings and new forms of negotiation vis-à-vis DAD, our findings are presented in Section 6. To develop the report, we draw upon a mixed method approach, combining quantitative indicators, academic literature, industry reports and systematic interviews conducted with actors involved/informed at different levels of the social dialogue process, from national, to industry, to workplace level ones. In addition, cross parallelisation and validation of the research outcomes have been conducted in order to harmonise the results.

1. National and sectoral labour market situation

In this Section we start from the presentation of the national and sectoral labour market status. Figure 1 shows the levels (left panel) of employment in manufacturing (NACE-C) and

the share of employment in manufacturing of total employment within the country (right panel) for France from 1993 to 2022 and the European Union (27 countries) average from 2002 to 2022. The number of workers in manufacturing in France decreased from four to three million, corresponding to 9-11% of the total European manufacturing employment, decreasing after the Great Recession period in 2007-2008, differently from the European average. The share of French employment in manufacturing over total employment within the country experiences a continuous decreasing trend starting in 2002 from the peak of 18% to 11% in 2022. Overall, the share of French manufacturing of total employment is constantly below the European average with increasing different rates.

Figure 1. Employment in manufacturing (NACE-C) in France and the European Union (27 countries) average, annual data from 1993 to 2022.

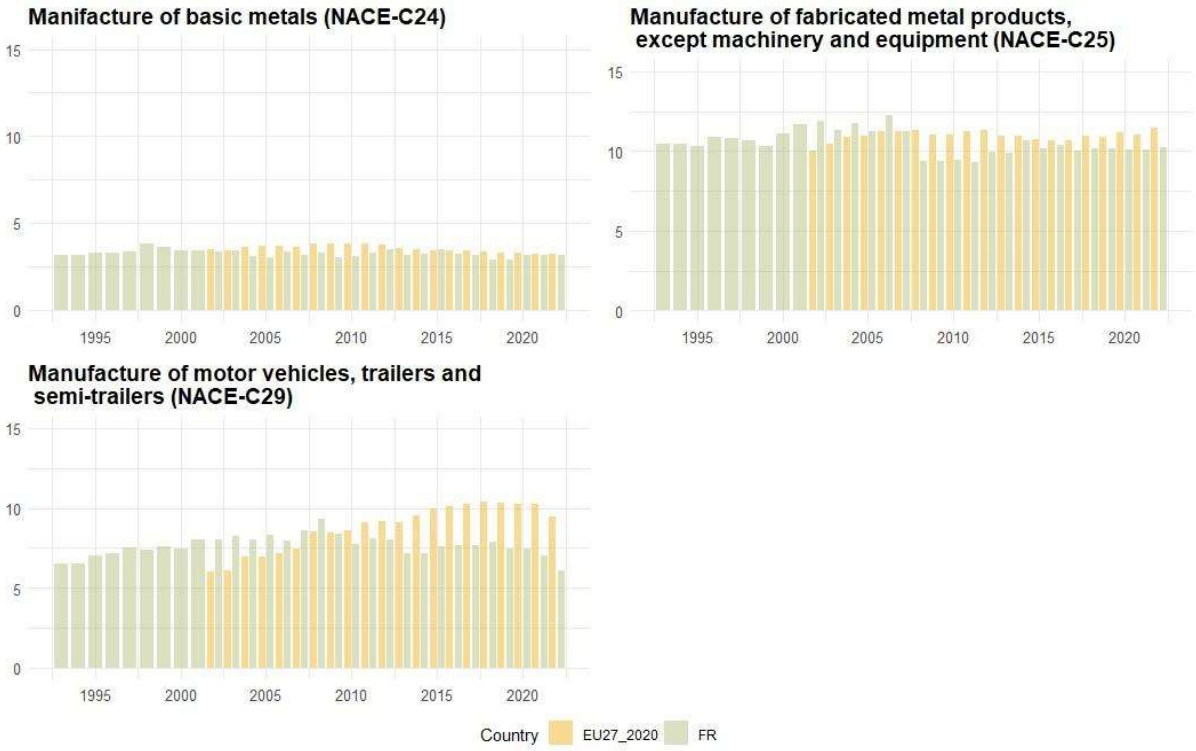


Data Source: Labour Force Survey, EUROSTAT

Figure 2 shows the share of employment in the manufacturing of basic metals (NACE-C24, top-left panel), of fabricated metal products, except machinery and equipment (NACE-C25, top-right panel) and of motor vehicles, trailers and semi-trailers (NACE-C29, bottom-left panel) of employment in manufacturing (NACEC) for France and the European Union average in comparison from 1993 to 2022 and from 2002 to 2022 respectively. The share of basic metals (NACE-C24) over total employment in manufacturing in France is stable around 3% over the time span considered, almost in line with the European average, being slightly below between 2003 and 2013. The share in fabricated metal products (NACE-C25) is around 10% over the entire time span, again in line with European average. The sector of manufacture of motor vehicles, trailers and semi-trailers (NACE-C29) covers seven percentage points on average of the total employment in manufacturing in France, being the French share higher than the European average between 2002 and 2008, thereafter the French share starts decreasing while the share for Europe increases. A decrease is evident both for France and

European average in 2021 and 2022 during the Covid-19 crisis. Among the three industries, automotive is the one showing the deepest declining trends.

Figure 2. Share of employment the manufacturing of basic metals (NACE-C24), of fabricated metal products, except machinery and equipment (NACE-C25) and of motor vehicles, trailers and semi-trailers (NACE-C29) of employment in manufacturing (NACE-C) for France and the European Union (27 countries) average, annual data from 1993 to 2022.



Data Source: Labour Force Survey, EUROSTAT.

2. Insight into industrial relations

2.1. Industrial relations context and actors

Industrial relations in France are based on a multi-tier collective bargaining system characterised by what has been referred to as 'polarised pluralism' (van Ruysseveldt and Visser, 1996), with low levels of trust among social partners, who are highly politicised and ideologically fragmented (Béthoux and Laroche, 2021). The peculiar feature of such a system is that it relies on strong state regulation and intervention to compensate for the low self-regulatory capacity of the social partners (Vincent, 2019). In addition to having legislation on the minimum wage, labour law in France defines the criteria for representation, the rules for concluding collective agreements and some mandatory subjects of negotiation (wages, bonuses, working time, professional equality and employment and skills recognition), as well as the distribution of contractual topics among the various levels of bargaining. In the country, all employees are covered by collective bargaining, regardless of their union membership and has been so since 1936, as sectoral collective agreements have been extended to all employers in a similar activity, irrespective of their affiliation to the employers' association.

This procedure can be initiated at the request of one or both parties or directly by the Ministry of Labour, which also ensures the validity of the signed contract by verifying its compliance with the applicable legislation. When assessing such procedures, the Ministry of Labour consults the National Collective Bargaining Commission, which is composed of equal numbers of representatives of trade unions and employers' associations. In practice, almost all industrial agreements are extended (*ibid*.). As a consequence, the OECD and AIAS estimate the bargaining coverage rata at 98% (OECD and AIAS, 2021).

In terms of "rights of representation", until 2008, the French government granted a presumption of representativeness to five trade union confederations recognised as representative in 1966. Any sectoral federation affiliated to one of these unions could therefore participate in collective bargaining at the industry or workplace level (Vincent, 2019). Any agreement signed by one of these federations was to be considered valid (*ibid*.). Since the labour law of August 2008, criteria to ascertain the representativeness of trade unions have been introduced by law, based on union results in workplace elections. To be considered representative, a trade union must obtain at least 10% of the votes in local work council elections and at least 8% cumulative votes at sectoral and national levels. To date, the same five trade union confederations continue to be recognised as representative and are: the *Confédérations française démocratique du travail* (CFDT), the *Confédération générale du travail* (CGT), the *CGT-Force ouvrière* (CGT-FO), the *Confédération française des travailleurs chrétiens* (CFTC) and the *Confédération française de l'encadrement-Confédération Générale des cadres* (CFE-CGC). While the first four are divided among themselves along political and ideological lines, the last one constitutes a special case among French trade unions, being a professional union representing managerial personnel (*cadres*).

Union representativeness is measured at national and cross-industry level, as well as at the professional branch level, every four years. The last trade union representativeness assessment (2021), covering the years 2017 to 2020, took into account more than 65,000 work council elections in which about 5,400,000 workers voted. This assessment consolidated the primacy of the moderate CFDT over the more radical CGT (26.77% of the votes against 22.96%), followed by FO (15.24%), CFE-CGC (11.92%) and CFTC (9.50%) (Ministère du Travail, 2022). This is a medium-term process that since 2013, has seen the CGT losing its primacy as the most representative organisation to the CFDT.

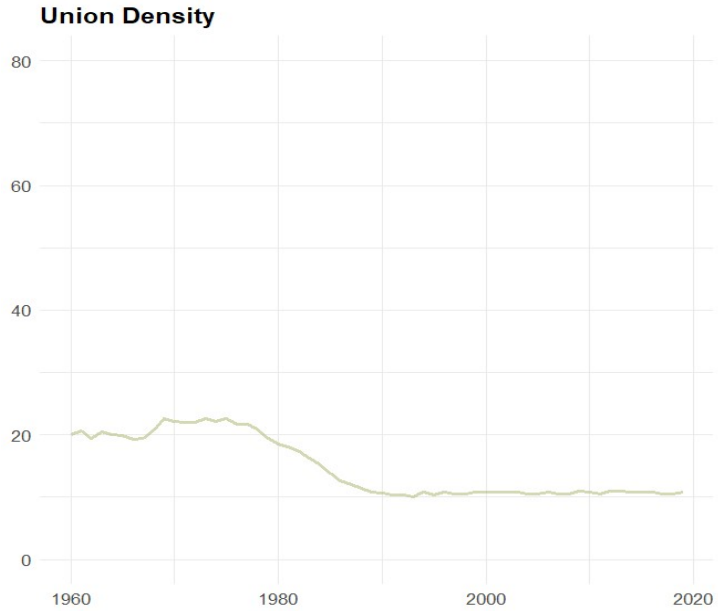
Alongside these five representative confederations are other autonomous or independent trade unions that do not reach the thresholds of representativeness at inter-confederal level. Among these, the most important are the UNSA, which is supported especially by public sector employees and the *Union syndicale Solidaires*, a group of grassroot unions (Béthoux and Laroche, 2021). At the sectoral or local level, the question of representation becomes more complicated. While the CFDT and CGT maintain representativeness in almost all bargaining units, the other confederations may be unrepresentative in some industries or regions. In the metal sector, the CGT and CFDT are representative in all regions, while the CFTC is representative in only 20 and has lost representativeness at national level, except for managerial and professional staff (Vincent, 2019). Among the latter, for instance, the representativeness of the CFE-CGC reaches a very high level of 45.9%. The diversity of

combinations at the workplace level is even greater (*ibid*.). It is therefore not uncommon for unions that are representative at plant level not to be so at group, branch or national level.

As far as the representation of employers is concerned, it is for the most part structured around three organisations. The most important is the *Mouvement des entreprises de France* (MEDEF), which is the most important organisation, aiming to provide general representation to businesses regardless of their size and sector (mostly taking care of the interests of large companies) (*ibid*.). The other two are the *Confédération des petites et moyennes entreprises* (CPME) and the *Union des entreprises de proximité* (U2P). The former seeks to represent small companies and has an intermittent relationship with the MEDEF, while the U2P represents mainly retail and building industry craftsmen and is often opposed to the other two organisations and sometimes close to the demands of trade unions (*ibid*.). As of 2014, to be considered representative at cross-industry or branch level, an employers' organisation must represent at least 8% either of all companies or of the employees working for these same companies. At the cross-industry level, Medef, CPME and U2P meet at least one of these thresholds.

With regard to trade union membership, it should be noted that historically France is characterised by a weak union density. Data presented in Figure 3 show a significant decline since the mid-1970s, with union density dropping from 20% to 10% during the 1980s (Béthoux and Laroche, 2021), although the estimates for the period between 1946 and 1968 have recently been challenged (Batut *et al*., 2023). A new calculation estimates that the membership in this period should be much higher, at almost 40%. The current rate of union density was long estimated at around 8%, but since 2016 the figure has been recalculated thanks to surveys conducted by the National Institute of Statistics and the Ministry of Labour (Pernot, 2018). As of today, it is estimated at around 11.2% and has remained stable in recent years (*ibid*.). Despite this stability, experts consider that there have been internal fluctuations in membership, especially from traditional industries to services (*ibid*.). Moreover, having a low membership makes it essential for French trade unions to benefit from state funding for some of their activities (such as training, information and research) (*ibid*.). Union membership is highest in the public sector where it is close to 20% and lowest in the private sector where it is below 9% (*ibid*.). In the private sector, it is highest in transport and financial activities and lowest in the accommodation and construction sectors (*ibid*.). Manufacturing is slightly above average with a union density of just over 12% (*ibid*.).

Figure 3. Union Density in France



In terms of employer organisation membership, France is one of the countries with the highest density, totalling 79.2% (OECD and AIAS, 2021). Despite being the most important organisation, MEDEF represents only 126,000 enterprises and 115,000 employers, which, however, employ as many as 9,370,000 workers. In contrast, CPME and U2P represent 243,000 and 204,000 enterprises as well as 124,000 and 110,000 employers respectively, employing 4,045,000 and 710,00 workers. In total, the number of enterprises represented by employer organisations in France is 573,000, employing more than 14 million workers. These numbers have been growing significantly since 2017, the year of the first official measurement, and it is mainly the two smaller associations that are driving this growth in membership, whereas MEDEF only has only shown a moderate increase (Ministère du Travail, 2021). Table 1 synthetically reports quantitative figures from ICTWSS, 2023.

Table 1. France Average Values.

	2018-2020
Employer Organisation Density	75%
Bargaining Coverage Rate	98%
Bargaining Levels	3

2.2. Collective bargaining system

The collective bargaining system in France is articulated on three levels: the national or social partnership level, the sectoral level and the decentralised enterprise and/or workplace level (Béthoux and Laroche, 2021). In addition, interprofessional and sectoral agreements can be concluded not only at national level, but also at the local level, resulting in a plethora of

territorial collective agreements. The national and interprofessional level aims to produce framework agreements that regulate the conditions of collective bargaining, but also more general aspects of the employment relationship, such as the length of the work week, retirement conditions and unemployment protection (*ibid*.). From 2008 to 2019, following the economic crisis, there was an intensification of social dialogue at the national level, with the signing of a number of national inter-professional agreements (ANI), intended, for instance, to strengthen the participation of workers' representatives on corporate boards or to allow for company-level derogations on working time and wages in the event of economic difficulties (*ibid*.). Many of these agreements have since been codified into law (*ibid*.).

In addition, a minimum guaranteed interprofessional wage has existed in France since 1950. In 1968, this statutory minimum salary was transformed into the Growth-linked Interprofessional Minimum Wage (*Salaire Minimum Interprofessionnel de Croissance*, SMIC). The government defines the SMIC rate annually, according to criteria based on inflation plus half of any increase in the gross hourly wage of blue-collar workers, albeit on a discretionary basis (Vincent, 2019). The government may also decide to raise it, for instance to stimulate demand (Pernot, 2018), however, no negotiations with the social partners exist in this regard. While trade unions once possessed the ability to pressure the government to raise the minimum wage, since the 1990s the shift in the balance of power in favour of employers has resulted in increasing pressure on the minimum wage, accused of being a brake on competitiveness and the main cause of the country's industrial decline (*ibid*.). While several attempts to undermine the SMIC have so far been prevented, labour costs have been eroded mainly through the reduction of employer social security contributions for employees earning between the SMIC and 1.6 times the SMIC, and through other tax exemption schemes for firms (*ibid*.).

The branch level has long been the cornerstone of collective bargaining in France, with the aim of improving the conditions present in the Labour Code or adapting them to the peculiarities of the various industries (Béthoux and Laroche, 2021). Extremely articulated according to the production sectors, collective agreements have undergone a merging process, launched under the *Loi El Khomri* (also known as *Loi Travail*) of 2016: from numbering more than 700 in 2014, they have reduced to 400 in 2019, with the expectation of stabilising them further at 250 (*ibid*.). The metalworking sector is an example of this process: the 76 territorial and specific agreements were recently merged into a single collective agreement (see further). Furthermore, in the last decade, various labour law reforms have sought to place company and workplace collective bargaining and agreements at the centre of the industrial relations system at the expense of sectoral collective bargaining. In particular, the 2017 decrees (so-called *ordonnances Macron*) abandoned the “favourability principle” and opted for a distribution of the bargaining topics among the various levels (ETUI, 2019), thus loosening the general coordination of the system. Having abandoned the principle of the primacy of sectoral agreements over company agreements, the 2017 decrees established that only the topics for which sectoral collective agreements still prevail over company ones (13 topics, including job classification, minimum wage and short-term contracts) and those for which the social partners decide that the industrial level can prevail over the company level should be negotiated in sectoral collective agreement (Béthoux and Laroche, 2021). Besides,

the decrees reduced the industry level 'lock up' faculty to four areas, mainly concerning issues of occupational safety and disabled workers (Vincent, 2019). All other topics can instead be negotiated at the company level, thus making it the priority level for the majority of subjects.

Some scholars have identified such institutional push for collective bargaining as a form of "administered" social dialogue (Mias *et al.*, 2016), to refer to the central role played by the State in creating a system that encourages industrial relations players to negotiate (Béthoux and Mias, 2021). Nonetheless, these legislative developments have also made the industrial relations system more complex, with an increasing number of issues subject to compulsory negotiation and the possibility for derogating from industry-level agreements or labour law. In practice, however, the use of derogations has so far remained modest, not least because the standards negotiated at industry level are often already the result of minimal compromises and leave little room for negotiating less favourable conditions (Vincent, 2019). Beyond encouraging the decentralisation of collective bargaining and reforming workplace employee representation (see further), the 2017 decrees also eased redundancy procedures due to economic reasons and introduced a compensation limit in case of legal proceeding, thus contributing to weakening the individual and collective protection of workers provided by the Labour Code (ETUI, 2019).

2.3. Decentralised collective bargaining and employee representation

The number of company and workplace collective agreements has risen steadily since the Auroux laws of 1985, which introduced the principle of compulsory annual negotiations on pay and working time (Vincent, 2019). The number of agreements peaked when the 35-hour work week was introduced in 1998-2002, and has continued to rise ever since (*ibid.*). Whereas around 36,600 agreements were signed in companies in 2015, around 61,000 were signed in 2019. However, the Covid-19 pandemic halted this increase, with several negotiations postponed due to the sanitary situation. As a result, only 55,700 agreements were signed in 2020, a fall of 9.2%. Negotiations nevertheless caught up with pre-Covid-19 levels and continued to rise after the lockdowns, with 67,600 agreements signed in 2022 (DGT, 2023). In 2021, 17.8% of companies with 10 or more employees in the non-agricultural private sector had conducted at least one collective bargaining agreement and they employed 63.0% of the employees in the field (DARES, 2023). The propensity to negotiate varies according to company size: it is only 10.3% in companies with up to 50 employees, but rises to 81.3% in companies with 200 to 499 employees and to 94.4% in companies with 500 or more (*ibid.*). It differs equally with respect to the production sectors: it is highest in industry, where it concerns 27.4% of companies and 74.9% of employees, while it is lowest in accommodation and catering services, where it concerns 6.3% and 34.8% of employees (*ibid.*).

In spite of these governmental efforts, the current scope of collective bargaining subjects at company level still seems limited, as bargaining topics still focus on the classic subjects while new ones struggle to emerge. In fact, wages remain the most frequently negotiated subject, addressed by 10.6% of companies employing 51.0% of employees. The theme of working conditions has seen the strongest increase – driven in particular by the development of teleworking – and is addressed by 6.5% of companies. Next on the list are working hours (6.0%

of companies) and employee savings schemes (5.8%) (DARES, 2023). Work organisation and technological change, in particular, seem to be outside the scope of collective bargaining and are considered strictly employers' prerogatives. Trade unions may be consulted on these issues within representative bodies, but have no decision-making power over them.

The 2017 decrees also reformed the system of workplace employee representation, in order to strengthen the legitimacy of employee representatives involved in negotiation. The aim is to encourage negotiation at the company level in order to create an autonomous and self-sufficient social dialogue, relatively independent of the rules of law.

In France, this representation is based on two channels:

a) Employee representation, embodied by the Social and Economic Committee (*Comité social et économique*, CSE), elected directly by all employees, in certain cases on union lists, especially in large companies. Created in 2017 by decree, the CSE has replaced the Site or Company Committee (*Comité d'entreprise/d'établissement*), the Health, Safety and Working Conditions Committee (*Comité d'hygiène, de sécurité et des conditions de travail*) and the Personnel delegates (*Délégués du personnel*). The CSE concentrates the functions of all these previous bodies and deals with handling employee complaints, consultation on company issues, working conditions, health and safety, and management of social and cultural activities[1]. The CSE must be established in all companies with at least 11 employees, once this number of employees has been reached for 12 consecutive months. It is elected every 4 years, but it is possible to negotiate agreements so that the duration is shorter (between 2 and 4 years);

b) In sites with more than 50 employees, the trade union delegate (*Délégué syndical*) is appointed by a representative trade union (having obtained more than 10% or more of the votes in the professional elections at the relevant election level). Their role is to negotiate and sign collective agreements, to represent their union in dealings with the employer, and to put forward claims and complaints. On sites or in companies with fewer than 50 employees where trade unions are rarely present (Dumoulin, 2019) or in companies without union presence, an employee representative may be appointed as a delegate from among the elected members of the CSE.

In addition, the 2017 decrees have facilitated collective bargaining in companies without trade unions, especially SMEs that are unable to negotiate due to their small size. As early as 1996, a law (later extended in 2015) established the right of the employer to negotiate with the elected works council representative or with a staff representative mandated by a trade union (Pernot, 2018). The 2017 decrees extended this possibility, allowing the employer, in the absence of trade union representatives and depending on the firm size, to conclude agreements with CSE representatives or with an employee mandated by a union (ETUI, 2019). In companies with fewer than 20 employees, the employer may submit an agreement to its

1 According to some experts, the merger of these three bodies may amplify an already existing trend towards the professionalisation of workers' representatives, especially due to the multiplication of responsibilities and compulsory negotiations, which increasingly distance the representatives from the represented (Pernot, 2018).

employees by referendum and the agreement is considered valid if it is approved by at least two thirds of staff (*ibid*.).

Among the State's efforts to encourage decentralised collective bargaining, it should be mentioned that the main feature of the introduction of new instruments for regulating employment in companies since 2013 is that they derogate from industry-level agreements. The so-called "competitiveness" agreements were initially conceived as crisis agreements, with the aim of preserving jobs. They were presented as "give and take" agreements, where the various players in the company agreed to the measures to be taken to restore the economic situation of the company. The aim was to decouple job cuts (where the law on redundancies and restructuring for economic reasons is applied) from changes in working conditions (Peskine, 2021).

The short-lived "competitiveness-employment" agreements of 2012 were succeeded by the "employment preservation agreements" of 2013. The El Khomri law of 2016 replaced them with "agreements to maintain or develop employment". Finally, the Macron decrees of 2017 replaced them with "collective performance agreements", while modifying the negotiation context and broadening the negotiation topics. Whereas the first types of agreements were highly restricted by law, in particular because they could only be signed in companies experiencing economic difficulties, collective performance agreements have a very broad definition, and can be negotiated at any time and on an increasingly wide-ranging subjects.

These new types of agreements call into question the principle of favour, i.e. they are opposed in their content to the clauses of the employment contract. In other words, in the name of preserving or developing employment, or the firm’s profit strategy, they take precedence over the content of employment contracts, thus modifying substantial aspects of working conditions, even if the agreement is less favourable than the employment contract itself (Dumont and Poinsot, 2017). If an employee refuses to accept the change to their employment contract, they can be dismissed. These contracts can also derogate from branch agreements, but cannot derogate from certain principles of French Labour Law, such as the minimum wage or the 35 hour week. Overall, they give employers a great deal of leeway in terms of negotiation, to the detriment of branch or national standards. From a logic of "derogation" we have moved to a logic of self-governance or self-regulation by companies in more and more areas (Béthoux and Mias, 2021).

Finally, employee representation on executive and supervisory boards has been in place in France for several years, particularly in previously state-owned enterprises (ETUI, 2019). The 2013 law extended the range of firms subject to this requirement, stipulating that the boards of large private companies must include at least one employee representative (*ibid*.). However, this system does not provide for any form of codetermination, despite the insistence in this direction of some trade unions (the CFDT in particular) (*ibid*.).

3. D-A-D and its effects

The automotive sector in France has been experiencing an important decline since the early 2000s, both concerning production levels, employment and market shares. Production figures from French plants show a significant slump: from 3.5 million vehicles in the mid-2000s to 1.4 million vehicles in 2022 (Sonzogni and Schulze-Marmeling, 2019). The structural causes of the decline of the French automotive sector are linked to the ruthless price pressure from Chinese brands in the low-cost segment, as well as competition from American (especially Tesla) and German brands in the premium segment. The latter was encouraged by an "upmarket drift" towards heavier and more performing premium cars production favoured by a European regulation that profits premium brands at the detriment of generalist manufacturers like Stellantis and Renault (Pardi, 2022). On the other hand, relocation of labour intensive and low-value added products to low cost countries in the European periphery (Turkey, Central and Eastern Europe and Maghreb countries). Higher labour costs and the stronger employment institutions characterising the French economy have further increased the pressure to relocate production, exacerbating the gap between the core countries and the peripheries (Pavlinek, 2018; 2022). This has three effects: a decline in production volumes, a decline in the workforce in the sector and a negative trade balance, as well as the efforts made by OEMs to reduce labour costs, notably through the competitiveness agreements mentioned earlier.

Given the progressive downsizing of the automotive sector and the loss of international competitiveness, a three-year strategic plan to revitalise the industry ("*Contrat Stratégique de la Filière Automobile 2018-22*") was introduced in 2018 by the Government with the direct involvement of the State, the Regions and all the companies in the supply chain. This strategic response envisaged the participation of the *Plateforme Automobile* (PFA) with the function of coordinating the different players in the automotive value chain, from the main French car manufacturers (Renault and Stellantis) to the big players in the components industry, to an association that brings together the SMEs in the sector (Osservatorio Nazionale Automotive, 2023). Shortly before this strategic plan for the automotive sector, the French public institutions had launched the FranceFab platform which brings together representatives of French public and private industry and institutions with the aim of revitalising the national productive fabric, its competitiveness and the development of workers' professional skills to meet ecological and digital challenges.[2]

Furthermore, in order to vigorously respond to the technological challenges relative to the digitalisation and the decarbonisation of the automotive industry, the French government has adopted several public investment plans. Specific measures to support the car industry and its employment resilience (*Mesures de Soutien aux Sous-traitants Automobile*[3]) are contained in the "*France 2030*" plan, approved in 2021, which allocates €54 billion over five years. The

2 https://www.lafrenchfab.fr/

3 The main institutional actors are: i) the Ministry of the Economy, Finance and Revitalisation – Directorate General for Enterprise (DGE); ii) the Ministry of Ecological Transition and Solidarity – Directorate General for Energy and Climate; iii) Avere-France (National Association for the Development of Electric Mobility); iv) ADEME (Ecological Transition Agency); v) Alliance Solution Industrie du Futur (AIF).

main objectives of the industrial development design are: i) encouraging the national supply of small modular reactors by 2030; ii) becoming the leader in green hydrogen and renewable energies by 2030; iii) decarbonizing the industry (greenhouse gas emissions – 35% between 2015 and 2030); iv) producing nearly 2 million electric and hybrid vehicles by 2030; v) producing the first low-carbon aircraft in France by 2030.[4]

As part of *France Relance*, the French government invested 20 billion euros in the fourth "Program of investments for the future" (*4ème Programme d'investissements d'avenir*, PIA4)[5] for innovation activities for the years 2018-2022. Of this amount, 11 billion euros accompanied the NRRP reforms for the digital and the green transition;[6] 2 billion euros were invested for the production and supply of low-carbon hydrogen, with the aim to generate between 50 and 150 thousand new jobs; 3.40 billion euros were devoted to research activities for the green transition among which the production of batteries for electric vehicles, the Battery Plan of the PIA4.[7] The hydrogen and battery for electric vehicle production strategy is mainly managed by two "Important Projects of Common European Interest'' (IPCEI),[8] first born as a collaboration between France and Germany in 2019. The Recovery and Resilience Facility has invested 1,575 billion euros for provisional funding before the setting up of the hydrogen IPCEI. With respect to other policies, several concern critical material provision.[9]

Following the outbreak of the pandemic emergency and the establishment by EU countries of National Recovery and Resilience Plans,[10] France launched a further plan of public investment 2020-2022 with €30 billion devoted to the ecological transition (€5.8 billion for energy renovation, €2.1 billion for ecology and biodiversity; €7 billion for green infrastructure and mobility; €5.3 billion for energy and green technologies), €34 billion devoted to French firms' competitiveness (financing firms €0.3 billion), technological sovereignty and resilience (€3.2 billion), digital upgrading (€2.1 billion)[11], and €30 billion devoted to territorial cohesion.[12]

The NRRP does not directly address the transition of the automotive sector, as the

4 Report published by the French government of the plan France 2030 available at: https://www.economie.gouv.fr/files/files/2021/France-2030.pdf?v=1697186793

5 The previous three plans were launched in 2009, 2014 and 2017. For more details see: https://www.gouvernement.fr/4eme-programme-d-investissements-d-avenir-20-milliards-d-euros-pour-l-innovation-dont-plus-de-la

6 Source: https://clean-energy-islands.ec.europa.eu/countries/france/legal/other-clean-energy-supporting-policies/rdd-policies-programme

7 More details can be found here: https://www.gouvernement.fr/batteries-lancement-de-l-appel-a-projets-solutions-et-technologies-innovantes-pour-les-batteries

8 For more details about the IPCEI for batteries see: https://www.ipcei-batteries.eu/. With regard to IPCEI for hydrogen see: https://ipcei-hydrogen.eu/

9 See: https://www.iea.org/policies/18074-australia-france-strategic-dialogue-on-critical-minerals; https://www.iea.org/policies/18053-critical-minerals-and-metals-equity-fund; https://www.iea.org/policies/17948-france-germany-italy-joint-communique-on-critical-raw-materials; https://www.iea.org/policies/18050-varin-report-on-critical-minerals; https://www.iea.org/policies/15026-france-2030-investment-plan-critical-minerals-investment.

10 The French NRRP (French version) can be found here: https://www.economie.gouv.fr/files/files/directions_services/plan-de-relance/PNRR%20Francais.pdf

11 Information about the French NRRP available at: https://www.economie.gouv.fr/plan-national-de-relance-et-de-resilience-pnrr#

12 Data by the French government on the plan *France Relance* available at: https://www.economie.gouv.fr/plan-de-relance

implications of decarbonisation and electrification of the industry on the production value chain and employment are not discussed. For instance, the issue of battery production is only mentioned with reference to the IPCEI and the PIA4 programmes. The only measure aimed at the automobile sector concerns bonuses for the purchase of eco-friendly vehicles, while great emphasis has been placed on public mobility and hydrogen solutions

In fact, with respect to the decarbonisation of the transport sector, the plan highlights the promotion of public mobility and infrastructures to limit private transport (€4,05 billion euros have been allocated for the recapitalisation of the State-owned railway company SNCF to improve infrastructures in non-urban areas; 900 million euros will be split between the development of subways in province areas, improvement of public transport infrastructures and services in metropolitan areas as Île-de-France). Moreover, the plan fosters private mobility by purchasing bonuses of ecological vehicles (885 million euros for light vehicles, 795 million euros for conversion bonuses, 100 million bonuses for heavy goods vehicles), stating that private vehicles are still necessary for a large part of the French population and an improvement in sales can boost demand and employment in the sector. The measure allocates 120 million euros of microcredit for low-income families for the purchasing of low-polluting vehicles as well.

The NRRP claims the new measures are in line with the political priorities already established in 2019 and with the type of infrastructures already installed in 2017.

Tens of thousands of direct (18,000) and indirect jobs are estimated to be created from the development of public mobility in non-urban areas, 55,000 among direct and indirect jobs in provinces and metropolitan areas. The plan also entails a measure for the upskilling and reskilling of workers to improve employability in future oriented sectors. An example of a project is the training of workers in hydrogen technologies in the automotive sector.

Nevertheless, the decarbonisation of the automotive sector is not sufficiently discussed by the NRRP. Indeed, the use of purchase bonuses to generate growth in production and employment emerges as a weak and insufficient mechanism to deal with the restructuring of industry. The same applies to the new jobs expected from investments in public mobility infrastructure, given the downward trend in manufacturing employment in France over the past decades (see Figure 1 and 2 in Section 1). Similarly, employment restructuring in the automotive sector is not discussed as a priority by the support measures to the car industry in France Relance, which entails only training for young and R&D workers and the unemployed, but does not recognise the need to retrain newly unemployed workers due to the decarbonisation of the sector.

In conclusion, the plan represents a clear initiative to reinvigorate France's industrial sovereignty and strategic autonomy, a path progressively followed even by the more comprehensive EU regulatory framework.[13] However, in terms of new jobs created, the order of magnitude of the new jobs created does not seem to compensate for the losses that have

13 For more details on EU strategic autonomy, see:
https://www.europarl.europa.eu/RegData/etudes/BRIE/2022/733589/EPRS_BRI(2022)733589_EN.pdf

occurred over the last decade and the general state of stagnation in the automotive sector.

Given the regulatory framework presented so far, the main policy initiatives that have been undertaken so far at the national level are below:

Table 2. National policy on D-A-D

Digitalisation-Automation	**France Relance:** ➢ Increasing French firms' competitiveness: €34 billion; ➢ territorial cohesion: €30 billion; ➢ diffusion of the optical fibre, promotion of digital inclusiveness and the digitalisation of the public administration at territorial level: €908 million. **NRRP:** ➢ Technological sovereignty and resilience: €3.2 billion; ➢ Digital upgrading: €2.1 billion.
Decarbonisation	**France 2030** (public investments approved in 2021, €54 billion over 5 years)**:** ➢ Becoming the leader in green hydrogen and renewable energies by 2030; ➢ -35% greenhouse gas emissions between 2015 and 2030; ➢ Producing nearly 2 million electric and hybrid vehicles by 2030; ➢ Producing the first low-carbon aircraft by 2030. **France Relance:** €30 billion devoted to the ecological transition. **NRRP:** ➢ energy renovation: €5.8 billion; ➢ ecology and biodiversity: €2.1 billion; ➢ green infrastructure and mobility: €7 billion; ➢ energy and green technologies: €5.3 billion).

4. Sectoral relevance of D-A-D – responses via collective bargaining

The main national sectoral collective agreement (NCA, hereafter) for French metalworkers was signed on the 7th of February 2022, after five years of negotiations, and came into force on the 1st of January 2024. The NCA was signed by the Union of metallurgy industry and professions (UIMM) and three national trade unions CFDT, FO and CFE-CGC. Despite its active

participation in the negotiation process, the other more representative metalworkers trade union – the CGT – did not sign the agreement.

The main novelty of this agreement consists in bringing under a unique text 25 national agreements and 76 territorial collective bargaining agreements, also combining specific agreements for engineers and managers of the sector. This decision has important results, starting from the much higher coverage of the new agreement that will represent more than 42,000 firms and 1,5 million employees. Interestingly, this important step towards more coordination and a centralisation of the bargaining framework has been pursued by all social actors. In the agreement, they advocate for the necessity of accounting for the profound challenges the industry is facing due to new technologies, changing organisational models and environmental issues. Indeed, the NCA – whose subtitle is "A new boost for industry" – opens with a two page preamble in which the history of collective bargaining in the sector is briefly sketched. It then focuses on the urgency of providing the adequate institutional tools needed to deal with evolving working environments and support firms' competitiveness.

The second main novelty of the NCA is the introduction of a new system of occupational classification. According to the agreement, jobs will be classified on the basis of six common criteria assumed to highlight the essential labour content of all jobs in the industry. The criteria concern: 1) the complexity of the activity; 2) the knowledge required for the job; 3) the autonomy; 4) the contribution over decisions and actions; 5) supervision/cooperation, 6) communication. Within this common framework, ten levels of intensity are defined for each classifying criterion to allow heterogeneity across job profiles and account for specific job requirements. Each job will therefore be scored with a ranking from 6 to 60, corresponding to 18 job classes (from 1 to 18) and 9 groups of jobs (from A to I). According to the CGT, the new classification entails several risks, including excessive discretion of employers in defining job descriptions (*fiche de poste*), the poor guarantees of upward mobility, the lack of recognition of diplomas as knowledge attributes and the scarce protection of workers' wage level (ensured only for the first round of transition to the new system). Certainly, the implementation of this new classification is expected to go through a multistep and complex process, to the point that the social partners have developed different interactive tools (such as a specific website and online tutorials) to support firms and employees.

For what concerns any more direct reference to digitalisation and ecological transition, evidence is found in the first part of the NCA that focuses on industrial relations and social dialogue. The agreement underlines the right of trade unions to be informed about industrial strategies on the adoption of new technologies and the management of the ecological transition, accounting for their potential impact on production and labour. Moreover, the text also evokes the obligation for companies with at least 50 employees to provide a database collecting economic, social and environmental data related to strategic choices made by firms. This provision (valid for all sectors) certainly represents an important tool to increase the degree of transparency, improving trade unions' awareness of employers' orientation on socio-economic and ecological issues. What is still missing, however, are regulatory interventions related to the emerging risks for workers' health and safety due to the

electrification of cars, as well as a perspective based on a life-cycle approach to assess the environmental sustainability of production.

5. Case studies

The French case studies analysed concern two factories belonging to a single subsidiary dedicated to the production of electric vehicles of a large national automotive group and are both located in the north of France.

5.1. Case study 1

5.1.1. Brief history of the plant – Providing the context

The first case study concerns a car bodywork and assembly factory belonging to a major automotive company. The site is of considerable size, employing a total workforce of more than 3,000 blue-collar, white-collar, technicians and managers as of 31 December 2022, and covering an indoor area of more than 30 hectares. Opened in 1970, the factory has over time produced some of the brand's most iconic models, reaching a record production of almost 470,000 vehicles in 2004. Currently, however, the factory is currently under-utilised, having produced less than 60,000 vehicles in 2022 out of a potential capacity of around 300,000.

The models assigned to this plant until 2022, mainly being of segment D (large cars, and MPV, larger passenger minivans) as well as diesel and petrol engines (only one model was available in a hybrid version) have encountered serious difficulties on the market, which have inevitably been reflected in production, leading to a state of almost constant recourse to temporary lay-offs as well as the employment of several hundred temporary workers. From 2022, production of a full-electric C-segment (medium sized cars) began at the plant, which accounted for around 80% of production in that year. From 2023, production of another full-electric, segment B model (small cars) is scheduled to begin. Subsequently, production of a third vehicle, on the same platform as the first, will begin.

The site's recent history is marked by the process of transition, both in terms of production and corporate structure, towards product electrification. The announcement of the arrival of the first modular platform dedicated to the production of electric vehicles dates from 2018. From the end of November 2020 to mid-January 2021, the factory underwent a restructuring process to integrate the new platform. This was the first substantial modernisation of the factory since 1986. The line had to be almost completely replaced in order to produce both ICE and EV models: only 20% of the former production line could be reused while more than 100 pieces of heavy machinery (robots and assistance equipment) and 400 workstations along with all necessary equipment were replaced. The assembly plant was also compacted by removing the first floor to optimise the production flow and to make room for a new battery assembly department.

Above all, a large area of the site, amounting to around 40% of the total surface, has been vacated, including dismantling unused buildings to allow the installation of a gigafactory for the production of battery modules. This gigafactory is owned by a subsidiary of a big Chinese

corporation and aims to serve the group's electric vehicle assembly factories in France, by reaching a capacity of 9 GWh in 2024 and 24 GWh in 2030. The investment in this gigafactory is estimated at around three billion euros and is supported by the French state to the amount of around 200 million. At full capacity, the gigafactory is expected to employ around 2,500 workers.

The modernisation of the assembly line was targeted at maintaining a takt-time of 60 vehicles/hour, improving the efficiency through enhanced ergonomics of the workstations, digitalisation of the production process for quality control, and redefinition of internal and external logistics aimed at reducing low-value-added phases through the introduction of kitting (i.e. the use of comprehensive kits for each vehicle), AGVs, and relocation of the lorry depot and parts logistics department adjacent to the assembly line.

The reorganisation of the assembly line was accompanied by changes in the work organisation as well. In fact, the new management took over some elements typical of the Toyota model by introducing a team leader for every 7-8 operators and holding regular team meetings. This happened at the same time that the company created the new subsidiary devoted exclusively to the production of electric vehicles. Other elements relating to the organisation of working time (overtime, working Saturdays, reduction of the summer break) were the subject of an agreement with the trade unions.

In 2021, the factory joined the group's electric vehicles production hub, which from 2022 became an autonomous subsidiary entity. After an adjustment phase, the factory gradually increased its production pace, reaching the target of 60 vehicles/hour during 2022. However, pending the start of production of the new models, the factory is still making heavy use of redundancy schemes, although it has already planned 300 new hires in 2024.

5.2. Case study 2

5.2.1. Brief history of the plant – Providing the context

The second case study concerns a component plant intended for the production of automatic gearboxes for the group's entire hybrid range. This plant is much smaller in size than the first case: nearly 350 employees on 31 December 2022 and 10 hectares of indoor area. Producing for the entire group, the plant has suffered less than the first one from production drops and consequently has experienced less recourse to social shock absorbers. In 2022, it produced approximately 200,000 units of gearboxes, also serving production sites located outside France.

The plant was also established in 1970, but has a slightly different history from the first case study. In fact, it was originally a joint venture between two large national groups. In 2013, the group under study bought the 20% previously held by the other group and the factory became a 100% subsidiary. The subsidiary status has provided the factory with more managerial and bargaining autonomy than in the first case study, which was more dependent on managerial and bargaining decisions made centrally at the group level.

In 2020, the plant began production of the first gearbox used in hybrid vehicles. Although its production is not oriented towards the full-electric range, in 2021 the plant also integrated the group's electric vehicles production hub, becoming part of the newly established BEVs production subsidiary on 1 January 2022. The integration of the latter implied some changes to the production side. Final assembly of the gearbox was moved to a production site outside France, while the factory in question assimilated the production of gearbox components from other plants.

In the context of the transition towards the production of electric vehicles, a large area within the factory was cleared to allow the installation of two production lines for aluminium battery casings – sets of extruded aluminium parts assembled by friction welding in which the battery modules are housed – a strategic component of the electric vehicle. This business unit does not depend directly on the company but is controlled by a joint venture with a Chinese firm specialised in this field, which holds the majority shares and also the key positions in terms of production management, whereas personnel management roles were allocated to staff from the French company. The joint venture aims at producing 300.000 battery casings per year by 2025.

During the time of the study, the new, highly digitalised production lines have just been installed and are not yet operating at full capacity. They employ a few dozen workers who are not included in the site's workforce count. Nonetheless, as the production of gearboxes for hybrid vehicles is set to decrease in the medium term, the workers of the factory have been given the opportunity to be hired by the new joint venture, with the possibility of returning within two years.

5.3. Social dialogue and collective bargaining in the two cases

a) Actors, context and drivers

The launch of electric vehicle production at these sites required a comprehensive reorganisation of their governance, as well as a complex negotiation process with the trade unions. Emerging from a difficult corporate and financial situation, the French group faced a major social crisis in May 2020 due to the announcement of several thousand job cuts in France. After suffering losses of several billion euros during the year 2020, the group had to resort to borrowing from the state to cope with the crisis. In February 2021, it presented a new strategic plan that included the reduction of production volumes and the electrification of the vehicle range. As part of this plan, the group announced the creation of a hub related to electrical production in the region, bringing together the three production units present there, the two covered by our case studies, plus another vehicle assembly plant, which had been the subject of closure rumours.

Trade union representatives interviewed describe the social crisis that occurred at the latter plant as crucial in pushing the group towards the decision to allocate production of and for electric vehicles to these plants. On the other hand, company sources emphasise that the group's intention was to build a complex production ecosystem around this hub, which could, on the one hand, shorten value chains, especially with regard to strategic electric vehicle

components, and, on the other hand, restore centrality to the group's national base. In this regard, the experts interviewed mentioned the role of the French state and local public authorities as central, though not decisive, in providing support, also financially, for this initiative.

It is likely that all the factors mentioned played a part in shaping this decision. In any case, according to the interviews conducted with managerial and HR professionals, in order to proceed along this path, it would have been crucial to obtain the agreement of the trade unions on certain aspects considered essential for the success of the plan. For this reason, between October 2020 and March 2021, the company managers organised ad hoc meetings, called “peer reflection groups” with the social partners of all three sites as well as bilateral meetings with individual trade unions. In these meetings, they explored, without revealing the strategic and economic contents of the plan, the willingness of unions to make concessions in terms of organisation of working time, pay structure and company reorganisation, in exchange for the perenniality of their sites.

The company's aim is to ensure the competitiveness of its sites in a process of reorienting its corporate strategy from a focus on production volumes to one on added value. However, the industrial context is still one of mass-market oriented production, and therefore with profit margins not comparable to those expected in the premium and luxury segments. All this within an overall scenario in which a substantial share of the value of each electric vehicle is to be found in components that are no longer directly produced by the OEMs. In this respect, negotiations with the unions were aimed at obtaining their prior consent on the need to improve the performance of the sites at the scope of increasing productivity and reducing associated production costs. The company's declared objective is in fact to achieve a transformation value per vehicle of more than 800 euros in the medium term.

Despite some reticence, all the unions present at the sites, regardless of their political orientation, accepted this agenda for discussion. This is weighed down on the one hand by the productive situation in which the factories find themselves, threatened with closure or burdened by constant recourse to redundancy schemes, and on the other by what is repeatedly called in interviews the 'sword of Damocles' of European regulation. Indeed, the 2035 horizon for the conversion of production from combustion to electricity is perceived as an external institutional constraint and as an unavoidable deadline to be reckoned with, even for unions with a more contentious attitude. The construction of a space for dialogue between social actors regarding the need to make production sites competitive in the context of the transition to electric vehicle production must therefore be read in the light of the shared assessment of the exogenous constraint represented by European regulation.

b) Sites reorganisation linked to electrification

After this round of consultation, official negotiations took place over five meetings between May and the first week of June 2021, and the new agreement was finally signed by all the trade unions and came into force on January 1, 2022. The main outcome of the agreement is the recognition of the merging of the three sites into a single company, which becomes a subsidiary of the group. This novelty implies the introduction of several provisions concerning

governance, working conditions and the general reorganisation of the three plants. More precisely, a single industrial management and a centralised human resources department are established; employment conditions between the various sites are homogenised through a structural harmonisation of the pay system, including the system of benefits and bonuses granted to workers.

The agreement also provides for a reorganisation of working time, through the establishment of a compulsory 15-minute overtime system at the end of the shift to be activated in the event of occasional delays in production (paid at 150%, 25% more than the legal norm), a reduction in the summer closure of the site from 4 to 3 weeks with the possibility for workers to use individually the fourth week at another time of the year (with two extra days off if this week is taken after 1 October) and the establishment of compulsory (and no longer voluntary) working Saturdays (8 the first year, 10 the second and then 12 to follow).

Finally, the last major point of the agreement concerns the recruitment of 700 new workers over the next 3 years to be spread over the 3 sites. However, concerning the new hirings, the company obtained the trade union agreement on the setting of an hourly wage corresponding to the current weekly working time (35 hours), rather than the 39 hours regime applied to the workforce already employed in the company. This represents a clear *de facto* segmentation of wage conditions within the workforce, accepted more or less easily by all unions, although there was no lack of internal discussions within some of them.

c) Automation, digitalisation and collective bargaining

The implementation of the agreement, as mentioned above, involved an extensive restructuring process of the sites, to allow the installation of new lines devoted to the production of components or the assembly of electric vehicles, including a battery charging bay in the factory covered by the first case study. This restructuring process also represented an opportunity to modernise the lines through the introduction of digital technologies and a further adoption of automation tools. However, the rationale for this technological innovation process does not seem to be directly related to the specific type of production envisaged, neither driven by the electrification process *per se*. In fact, according to all interviewees, especially process and product engineers, there is no direct link between product electrification and process digitalisation. From a managerial point of view, however, there is an indirect but equally strong link: process digitalisation is seen as an opportunity to increase plant productivity through an overall optimisation of the production process (i.e. reduction of time to market, control and resizing of low value added activities). The process of digitalisation adopted in the sites under study seems to follow a tailored approach rather than a general one, as the implementation has mainly followed specific needs and applications, even if some interviewees mentioned an overly top-down introduction of certain technologies, sometimes disconnected to real needs.

While the conversion towards EV production was at the centre of the collective agreement in terms of overall sites' restructuring, technological innovation processes were not the subject of negotiation with unions and worker representatives. As mentioned above, technological changes are not part of the mandatory subjects of collective bargaining at company level. In

this specific case, the company merely complied with its legal obligation to consult the CSEs on these issues, without establishing a real dialogue or concertation with the workers' representatives. One of the reasons for this is that technological innovation issues are often centrally managed by the group and even local management has little control over them. On both the managerial and union sides, it emerged how technology is conceived as being outside the spheres of competence or interest of union negotiators, who are often full-time union officers, and instead perhaps closer to the concerns of those workers' representatives still working on the lines. According to some interviewees, trade union concern with respect to the implementation of new technologies was more focused around fears of technological substitution and monitoring, with scarce interest towards the consequences of technologies on job quality, working conditions and worker skills. Therefore, the company's response also focused on the same issues, assuring that the introduction of new technologies would not lead to job redundancies and that workers potentially replaced by the innovation processes would be re-employed within the factories (e.g. forklift drivers replaced by AGVs). That said, interviews with digitalisation managers and technicians revealed how the extensive use of new technologies is intended to achieve both work intensification and labour savings. Interviews with trade unionists also showed concern about the use of digital technologies to monitor individual workers performance and errors in real time.

Finally, turning to the impacts of digitalisation, automation and decarbonisation on workers' skills, simultaneous and contrasting effects emerge in the case studies. On the one hand, a positive impact emerges for what concerns the workforce skill composition, both because of the increasing demand of specialised job profiles and because of a certain investment in training. In fact, the restructuring of the factory aimed at electrifying products and digitalising production have led the company to look for new highly qualified figures: maintenance workers, data analysts, and production engineers with specific skills related to BEVs manufacturing. To this end, the company has set up partnerships with local vocational schools and technical universities. Moreover, the employment of workers in specific departments characterised by a greater contact with electrical voltage (battery assembly and vehicle assembly portions following battery installation) required the provision of specific training programs, aimed primarily at preventing safety risks. In addition, a specific matrix system was implemented at both production sites to certify the skills acquired by workers in production.

On the other hand, some signs point to a somewhat more nuanced view concerning the pervasiveness of the digitalisation process and the related worker skills improvement. The initial digitalisation strategy was indeed envisaged to cover mainly hierarchical production functions (team leaders, supervisors), while only at a later and more recent stage, the use of some digital devices (such as tablets or screens) at the workstations started to be extended to production workers as well. Moreover, as far as new hires are concerned, the company has decided to abandon its traditional policy of hiring only high school graduates, on the one hand eliminating the diploma requirement for hiring and focusing on in-house training, and on the other hand concluding agreements with local public authorities to hire unemployed and underemployed workers benefiting from income support subsidies. Finally, despite the presence of a system of certifying acquired skills, according to trade union sources the

attainment of such certifications would not entail any economic recognition, thus not allowing an adequate valorisation of these skills.

The main results from both case studies are summarised below.

Table 3. Main results of case studies

Case-Study 1 *Car assembly plant*	**Case-Study 2** *Gearboxes manufacturing plant*
Digitalisation-Automation: introduction of new technologies	**Digitalisation-Automation:** introduction of new technologies
➢ Digitalisation used to compress production time and considered as a precondition for electrification because it ensured the competitiveness of the factory despite high labour costs. However, the factory is still more automated than digitalised.	➢ Already a highly automated factory, where digitalisation is introduced to interconnect machinery and tools and facilitate operator accessibility to the machine. A JV for battery packs production has been created within the plant. The new battery pack department appears to be heavily digitalised.
➢ **Ex-ante**: no room for negotiation, union representatives are only informed when new technologies are implemented, but "design thinking workshops" have been organised with groups of employees.	➢ **Ex-ante**: no room for negotiation, union representatives are only informed when new technologies are implemented. No mention of "design thinking workshops".
➢ **Ex-post:** monitoring of safety and ergonomic aspects, unions' concern about increased digital control on performances.	➢ **Ex-post:** monitoring of safety and ergonomic aspects, strong managerial focus on safety precautions.
Decarbonisation	**Decarbonisation**
➢ Negotiation on the reorganisation of working time and reconfiguration of the overtime system (from voluntary to mandatory);	➢ Point 1, 2 of case study 1 also apply here, but so far no new hires;
➢ Negotiation of new hires but at 'market-price' wages and without traditional company social benefits;	➢ No negotiation over the creation of the JV, but plant workers are offered the opportunity to go to work in the JV with the guarantee that they can 'go back' within two years;
➢ Unions focus on safety related to electrical processes, especially in the battery department.	➢ No established social dialogue in the JV so far.

6. Findings

According to this report, the following series of findings have emerged.

- DAD processes are effectively shaping the direction of the industry in recent years, with a prevalence of effects deriving from the process of conversion toward electric vehicles.
- The transformation that DAD poses is embraced by a national institutional setting that is attempting to seize the opportunity given by the new challenges, with the effort to reinvigorate the automotive industry which has been suffering a prolonged decline.
- At the macro level, the plan France 2030 represents a clear orientation of the country to reacquire competitiveness and industrial sovereignty, together with attempts to reach the status of the first green economy of Europe. However, the decarbonisation of the automotive sector is not sufficiently discussed in the NRRP and the restructuring of the industry is addressed through weak measures of demand support and training for young workers.
- Formal industry-level institutional settings have been set-up, with the attempt to create coordinated actions among economic and productive partners, including final OEMs and suppliers of parts and components. The initiatives represent forms of dialogue platforms among partners more oriented to coordinate employers, with some interest toward employment reskilling issues.
- The presence of a form of administrated social dialogue is identified, together with a progressive weakening of the scope of industry level bargaining.
- The new industry level agreement largely focuses on redefining worker occupation profiles based on the complexity of the process, the autonomy in doing the jobs, the relational and coordination spheres. The new agreement, although reconfiguring the nature of the occupational profiles, has increased the number of qualification levels, resulting in a total of 18 job classes and 9 job profiles, assigning potentially more discretionary power to employers in the definition of the intensity of each work domain, rated with skill matrices. The industry agreement also mentions information rights on investments plans, technological solutions and environmental sustainability.
- The progressive erosion on the role of sectoral level bargaining towards company level ones is clearly manifested in the case of the challenges posed by decarbonisation, where the report identifies a specific company level agreement independent from sectoral level ones.
- The emergence of idiosyncratic corporate needs to face the transition has initiated in the cases under study new forms of company-level social dialogue, primarily managed by the ownership structure and mostly oriented to secure corporate interests in a process of deep restructuring. The weak trade union position in the negotiation process was the result of a prolonged crisis suffered by all plants in the area.

- The site level agreement was directed by the management but has represented a clear opportunity for trade unions to actively participate in the direction of the restructuring process. After intense negotiation, the role of trade unions has been mostly confined in ratifying new levels of productivity standards, working time restructuring, and new hires, but at a lower entry wage level.
- At the workplace level, technological innovation remains far away from the negotiation process. Management sees digitalisation as an opportunity to increase plant productivity, through an overall optimisation of the production process. However, technology is conceived as a corporate prerogative and outside the scope of collective bargaining, whose task remains confined to defining the terms of the employment relationship.
- In terms of skill recomposition, new hirings at higher levels of professional profiles have occurred and safety training has been initiated to manage the production of BEVs. However, for traditional job profiles such as line operators, the company has decided to stop considering a high school diploma as a minimum requirement for recruitment.
- The recruitment of new workers at lower wage levels than those already employed and the lack of recognition of educational qualifications, if not compensated for by sufficient in-house training and ample opportunities for upward mobility in the internal labour market, risk exacerbating processes of workforce dualisation.

Given such findings, in the context of a progressive erosion of industry level bargaining agreement, of a prolonged crisis for the sector, in terms of reduced productive capacity and long redundancy schemes, the policy recommendation goes in the direction of fostering harmonised forms of social dialogue at all levels of interaction, with the scope of preventing an asymmetric management of the transition.

The report highlights in fact that even in the presence of an institutionalised form of 'administered' macro-level social dialogue, the emergence of company based agreements is opening up a plethora of configurations of pay schemes, working rhythms, skills evaluation, training processes. On top of that, the weakening positions of workers and trade unions, when confronted at the workplace level, might induce forms of employee adherence to new agreements even potentially at the cost of the new hires. In that respect, the cases analysed are quite far from a path toward a workplace-level just transition. In addition, the still infant production volumes do not yet ensure stable prospects in terms of sales, and such uncertainty from the employer side will progressively tend to be passed on to employees.

Considering that DAD processes are occurring at the industry level, trade unions and social actors should mobilise their capacity to achieve coordinated, industry level agreements that limit derogations at the plant and company level. This should be achieved by promoting social dialogue at higher levels of interaction, even the macro-institutional one. Indeed, if the French industrial relation system seems to be constrained by state regulations on the one hand, and employers interests on the other, DAD opens the possibility to activate new forms of social dialogue foreseeing the direct involvement of trade unions in new matters.

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8. Technical Appendix

8.1. Interviews for each Case-Study

Case-Study 1	**Case-Study 2**
12 interviews	*4 Interviews*
• Technical-professional workers & Managers (n. 8): 1. Plant Director 2. HR Manager 3. Former HR Manager 4. Head of Technical and IT Services 5. Chief Digital & Information Officer 6. Head of communication 7. Head of decarbonisation 8. Battery process product pilot	• Technical-professional workers & Managers (n. 2): 1. HR Manager 2. Process engineer
• Union Representatives (n. 2): 1. Central union delegate 2. Plant union leader	• Union Representatives (n. 2): 1. Central union delegate 2. Central union delegate
• Workers (n. 2): 1. Collective interview with 9 assembly or body shop operators, worker representatives or union militants 2. Assembly operator, worker representative in the battery department	

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