

August 2023

European Social Observatory deliverable

**The impact of
digitalisation on social
dialogue. A comparative
cross-country and cross-
sectoral analysis**



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**DIGIQU@LPUB – Deliverable D4.2
Final report**

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With the financial support of the



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Introduction

The eight country reports contain extensive information and cover a wide range of sections and topics relating to the links between digitalization and social dialogue. This comparative report is the result of the broad overview and comprehensive insights in each of the country reports, gleaned from desk and fieldwork, interviews and focus groups carried out with the social partners, especially trade unions.

In order to not merely present the various national cases, summarizing in short the country reports one after the other, we have decided to opt for a horizontal and transnational cross-cutting approach. We did this by grouping and describing the different sections and sub-sections, based on the national systems of industrial relations, with their macro-regional affinities, as they are traditionally classified in the international literature (Visser, 2009; Gumbrell-McCormick and Hyman, 2013; Pedersini 2014; Eurofound, 2016, 2017; 2018). We have therefore read and organised the presentation of the national cases on the basis of four geo-political clusters, relating to the eight countries of our study:

- *Nordic*: Finland and Denmark
- *Continental*: Germany
- *Southern*: France, Spain and Italy
- *Central-Eastern*: Poland and Hungary

A fifth further cluster, usually considered in the literature – the *Anglo-Saxon* and ‘liberal’ cluster – was not represented in the project research partnership ⁽¹⁾. This classification takes account of the different institutional frameworks, social dialogue traditions and practices, the relationship between the role of State interventionism and the degree of autonomy of the social partners; the levels and coverage of collective bargaining; union density rates; workers’ involvement and participation; strikes and industrial unrest.

With such a background and framework, we have added – through the desk and fieldwork conducted in each of the eight country reports – the trade union approaches to the ongoing digital transition: ideas, concerns, expectations, strategies.

As the study was conducted in sectors where the state and public employers often play a very important, even a predominant or exclusive, role, the legal status of the employees is of some importance. In some cases, civil servants – subject to specific laws and regulations – can be

1. Someone has differently and more extensively named them, as Nordic ‘*Organised Corporatism*’, Continental ‘*Social partnership*’, Southern ‘*State-centered*’, Western ‘*Liberal*’ and Central-eastern ‘*Mixed*’ (Visser, 2009). Beyond our study’s sample of eight countries, the Nordic model includes also Sweden (and Norway and Iceland out of the EU); the Continental Belgium, Luxemburg, Netherlands, Austria, Slovenia (and Switzerland); the Southern Greece and Portugal; Central-eastern Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Romania and Slovakia. The ‘*Liberal*’, or ‘*Anglo-Saxon*’, which was not represented in our study, includes Ireland (and the UK).

completely or partially excluded from full enjoyment of the most typical trade union freedoms and rights, such as free collective bargaining and the right to strike. This trait is still very typical in the two CEECs included in the study: Poland and Hungary.

Obviously, it is not easy – if not impossible – to fully summarise the variety and richness of the eight national and sectoral situations described in the reports. However, we will try here to select compare some of the main results regarding every heading and sub-heading making up the different paragraphs, together with all the feedback given to the research questions included in either the third section of the study, or in the fourth, focusing on recommendations for national and European stakeholders.

After placing the different national systems of industrial relations in context (Section 1), the following paragraphs will focus on the three sectoral studies: electricity (Section 2), the public administration (Section 3), and the hospital sector (Section 4). This will be followed by a paragraph giving overall sectoral cross-cutting comparisons (Section 5), then concluding with recommendations for national and European stakeholders (Section 6).

SECTION 1. CONTEXTUALISING THE NATIONAL SYSTEMS OF INDUSTRIAL RELATIONS

1.1 The two Nordic Countries

The two Nordic countries involved, Finland and Denmark, belong to what the literature refers to as the Nordic model cluster of industrial relations (Eurofound, 2016; Visser, 2009; Andersen, Ibsen, Alsos, Nergaard, Sauramo, 2015; Kjellberg, 2022; Høgedah, Nergaard, Alsos, 2022). They have in common a universalistic and encompassing welfare state system (Esping-Andresen, 1990), traditionally generous, and based on high and progressive tax rates. These systems promote social inclusion and comparatively low levels of inequality, poverty and social exclusion. They are both *coordinated market economies*, with a long and strong tradition of social dialogue, a result of the high institutional status historically attributed by the state to the trade unions. Finland displays particularly strong *social corporatism* (Schmitter and Lembruch, 1979), whereas the traditional *‘Danish model of industrial relations’* (Knudsen, Lind and Refslund, 2023) has lost some of its original strength over the years, losing out to more pro-active and market-oriented dynamics.

Intervention of the state and the law in industrial relations has remained rather limited and always secondary, with the social partners’ autonomy prevailing in collective labour regulation. As in the whole Nordic area, this model is based on historical agreements involving social compromise, signed as far back, in the case of Denmark, as 1899 (the ‘September agreement’), and since then obviously updated and amended. Social dialogue as a method – although the term ‘social dialogue’ is not really used in Denmark – is usually preferred to mandatory legislation, which is considered – as a Finnish interviewed stated – *‘too crude and clumsy’*. The state plays an active role in facilitating and legitimising the long-lasting self-regulation by the social partners (Pesonen and Riihinen, 2002; Kangas and Saloniemi, 2013).

Both countries have no statutory minimum wage; this is instead collectively agreed, sector by sector (Alsos, Nergaard, Van Den Heuvel, 2019). Both Finland and Denmark, with Sweden too, have been extremely critical – with all the stakeholders united in this battle – of the recent Directive for adequate minimum wages in Europe. Unlike Denmark, where high coverage is reached on the basis of the very strong levels of membership of both sides, Finland has an extension mechanism for national collective agreements. Despite this institutional difference, both countries boast levels of collective bargaining coverage among the highest in the EU; over 90% in Finland and over 80% in Denmark. In the public sector, the coverage is *de facto* 100% in both countries.

Trade union pluralism has not developed the kind of ideologically rooted structure typical, for example, of Southern and Latin countries (communists, social democrats, Catholics, etc.). Instead, an unusual distinction is made between employees based on their education and area of work (Gumbrell-McCormick and Hyman, 2013). There are three confederations in Finland and two in

Denmark, all covering both public and private sectors: one for general and low-skilled employees or blue collars (SAK in Denmark and FH, formerly LO, in Denmark); one for white collar employees (STKK in Finland and AC in Denmark), and one more for graduate professional staff in Finland (Akava).

Also, because the unions are entitled to manage the unemployment insurance funds, under the so-called 'Ghent system' (Ebbinghaus et al., 2011; Sippola and Bergholm, 2023), workers have a strong incentive to join the trade unions of these two countries, and levels of union density are some of the highest in Europe and in the free world. Although declining in both countries, as almost everywhere, Finland and Denmark can still boast a unionisation rate are of 64 in Denmark and 60% in Finland (²), where the decline (it was 74% in 2000) is becoming quite serious and worrying. Even among employers, the membership rates of their confederations and sectoral federations are some of the highest in Europe. In both countries, the female component is very strong among the members, and the number of employees in the public sector federations has now exceeded the number of members from the manufacturing sectors.

Besides the Ghent system, another factor often used to explain trade union strength in the two countries is the widespread presence of unions and shop stewards at the workplaces and at the local level, which allows for a permanent discussion on key issues such as work organisation and working conditions.

Regarding the main level of collective bargaining, in Finland, the cross-sectoral level has always played an unusually important role compared to other European countries, with a very low share of company-level agreements. In Denmark, on the other hand, collective bargaining at company and local level has always been important, and decentralisation, although still within a centrally coordinated framework, has been gaining ground over the last two decades.

What these two models of industrial relations have in common is their strong participatory side, confirmed by all comparative surveys and the index on democracy at work, and consisting in strong worker and trade union involvement in organisational and even strategic decisions concerning the management of the enterprises. The organisation of work, in particular, together with the psychophysical health of workers, is the focus of very innovative and consensual practices in both systems, both involving collective bargaining and in the form of direct and informal participation. These systems are a model of economic and industrial democracy, which can be considered among the major distinguishing features of Nordic societies and their past social democratic commitment.

2. Data taken from the two national chapters in Waddington, Muller, Vandaele, 2023 and are updated to 2019.

At the national level, there are tripartite and bipartite commissions, such as the Danish *Council for Work Environment*, tasked with studying new solutions for health and safety and the working environment.

Over the years, in both countries, there has been a sharp decline in industrial conflict in the industrial manufacturing sectors, whereas, on the other hand, serious conflict breaks out now and again in the public and service sectors. In Denmark, 80% of the strike days between 2000 and 2019 concerned the public sector.

Finland and Denmark are also countries with highly competitive production systems geared towards technological innovation; citizens and workers have some of the highest levels of education in the world (Alsos and Dølvik, 2021). Digitalisation is therefore an established and widespread reality, in more and more workplaces. In Denmark this has been reflected in joint relations and framework agreements, such as the 1986 agreement - signed by the two major confederations of the social partners (DA and LO) – in which entrepreneurs undertook to discuss technological innovation projects with local unions, together studying measures to prevent negative consequences for workers. Another institution where these issues are debated is the tripartite Danish Authority for the Work Environment. 'Cooperation agreements' are mainly signed at the level of companies and offices, where an important guiding role is still played by the mixed national commissions of the sector, with guidelines for collective bargaining. Digitalisation as such has not resulted in major controversies or disputes between trade unions and employers. This is likely due to the traditionally positive stance of the trade unions towards technological development, from the perspective of their consensual management, favoured by their strong system of industrial relations. This approach is generally described by the social partners as '*constructive*' and '*responsible*', despite an awareness that some occupational segments could suffer negative effects. Overall, the unions' idea is that digitalisation is a good thing, destined to produce more benefits than problems. For instance, the 'Danish model' is considered well equipped enough to limit any possible damage. However, there is still quite intense debate about specific problems and solutions, at all levels (Petersen and Schou, 2020; Rolandsson and Dolvick, 2021).

The Finnish situation is slightly different, as the issue of digitalisation does not seem to have significant weight in the social dialogue and collective bargaining between the social partners. Companies and offices are the most appropriate levels for this, but in 2021 the three central confederations (SAK, STTK, Akava), together with the employers, published a joint memorandum of understanding on social dialogue and digitalisation, in which they emphasize the importance of the dialogue between management and personnel, and also among the personnel.

1.2 The Continental model: the German case

The German model of industrial relations can be considered as a sort of archetype of what is commonly known as the 'continental system'; different from both the Nordic and the Southern systems. In comparative studies, it has been classified under the category of *neo-corporatism*, like the Nordic countries, but with weaker social partner associations (Schmitter and Lembruch, 1979). Social partnership and concerted action have been the basis of the German model of industrial relations in the post-war decades (Jäger, Noy, Schoefer, 2022), and of its relative success. The law regulates in detail all the major issues relating to industrial relations: workplace representation, collective bargaining, co-determination in a company's board, strikes and lockouts and, since 2015, the minimum wage.

The way in which the social partners are organised has for decades been almost monopolistic, concentrated in one or very few large associations on both sides. The DGB (*Deutscher Gewerkschaftsbund*) is by far the most representative trade union confederation, currently with eight affiliated federations⁽³⁾, according to the industrial lines of organisation, typical of the continental tradition. Two in particular – IGM and ver.di – have the largest number of members. In recent years, various alternative trade union actors have emerged and gained space, capable of eroding the historical hegemony of the DGB. This is particularly true in the public sector, the DBB (*Deutscher Beamtenbund*) has now reached 1.3 million members. Another organisation to mention here is the Confederation of Christian Trade Unions (*CGB*), with just under 300,000 members.

Union density is constantly declining (Dribbusch and Bilke, 2019), at 16% in 2020 (Muller and Schulten, 2023), and today it is estimated at around a very worrying 13-14%. In the public sector, it is much higher than in the private sector: approximatively 60%.

Employee representation is structured in a 'dual channel', with works and staff councils (*Betriebsräte* and *Personalräte*) elected by all the employees, union members or not, with participatory rights, and trade unions, emanating from members only, endowed with negotiating prerogatives. The minimum threshold for electing a works council is five employees; nevertheless, more and more workplaces today, although above the threshold, lack that representation. Works councils have, by law, intense rights of co-determination in areas such as work organisation, overtime, part-time work, paid holidays and leave, methods of payment, social bonuses and benefits. Although formally denied collective bargaining power, which belongs to trade unions only, works councils have in recent years expanded their traditional prerogatives, from the field of participatory

3. They are the following: IG Metall (IGM), Vereinte Dienstleistungsgewerkschaft (ver.di), IG Bergbau, Chemie, Energie (IG BCE), IG Bauen-Agrar-Umwelt (IG BAU), Gewerkschaft Nahrung-Genuss-Gaststätten (NGG), Eisenbahn- und Verkehrsgewerkschaft (EVG), Gewerkschaft Erziehung und Wissenschaft (GEW), Gewerkschaft der Polizei (GdP)

rights to the sphere of collective negotiation, by agreeing 'opening clauses' which, under specified conditions, allow company arrangements that are less favourable than the terms of the sectoral agreements. Yet, the works council has no power to call a strike, which again belongs exclusively to the external unions.

The most famous and peculiar pillar of the German model of industrial relations are probably the co-determination rights (*Mitbestimmung*) in companies' supervisory boards (*Aufsichtsrat*) (Muller-Jentsch, 2008). By law, German workers and their unions are entitled to elect their representatives, with full voting rights, to one-third of the seats in companies with between 500 and 2,000 employees: half of the seats in companies with more than 2,000 employees.

Collective bargaining takes place predominantly at sectoral level and on a regional basis. It sets the main rules governing individual and collective employment relationships. Wages are negotiated annually or on a biannual basis, whereas the other general norms have a longer duration. Sectoral collective agreements are formally binding only on the parties who have signed them and their affiliates. However, at the request of one or both of them, the Federal Ministry of Labour and Social Affairs may declare such agreements 'generally binding', by means of an administrative act extending their scope. Despite this possibility, the use of the extension mechanism remains quite limited and residual.

The coverage of collective bargaining has been declining for years, and today stands at 49% in the western Länder (45% at sectoral level and 9% at company level) and 43% in the east (IAB, 2022). According to other sources (Muller and Schulten, 2023), in 2020 it was 51% as a national average, between western and eastern *Länder*. This is today one of the lowest figures among the old EU Member States. The situation is very different in the public sector, where collective bargaining coverage is slightly over 90%.

Union density has also been suffering, as we said before, a slow and rather constant decline, and today is one of the lowest among the western Member States. Worried about this eroding trend, German unions are engaged in new forms of organising, at the same time calling for more binding extension procedures for sectoral collective agreements. This is true especially in the sphere of public procurement, where there must be complete compliance with the collectively agreed rules stipulated by the trade unions.

In general, trade unions appreciate the positive aspects of digitalisation. The assumption is that it enables and reinforces work flexibility in terms of time, venue and organisation, and opens up a range of options for both employees and companies. The digital transition should be implemented not only for its rationalisation and economic benefits, but as a general objective, in order to better reconcile quality of services and working conditions. Trade unions also stress the importance of

participation in the decision-making process over the whole course of the digital transformation. This would alleviate the fears and resistance of workers and would help optimise technological change. In combination with further training and skill development measures, employees would be supported in further steps. The interviewed partners do not expect a specific reduction in jobs due to digitalisation. They consider job losses as a phenomenon of the past, since digitalisation started in the electricity sector long before other sectors. The sector has to deal, rather, with other problems: a shortage of qualified staff and recent upheavals due to the war in Ukraine, associated with energy shortages and rising prices. The trade unions were not able, in their collective bargaining, to achieve general agreements on digital transformation. During the Covid-19 pandemic, it became increasingly difficult for the trade unions to maintain contact with employees working from home. Due to data protection regulations, many companies are often unable to make internal communication channels such as company e-mail addresses available to third parties. Trade unions highlight data privacy, protection and transparency issues in the sector. A digital environment brings a wealth of data. The behaviour and performance of individual employees become, hence, transparent and open to supervision. This raises corresponding challenges for the protection of employees' data and privacy. Trade unions are continuing their efforts to raise awareness on the protection of personal rights in working life and provide information about current activities and events.

The works councils, where established, are usually quite aware of workers' data protection, and restrict the possibilities for analysis of these data as much as possible. The 2021 DGB draft of a new version of the *Works Constitution Act* contains a number of improvements in employee data protection, such as the works council's duty of co-determination with regard to company data protection measures. The Works Constitution Act establishes that the works council has the right to be informed by the employer in good time in the event of the introduction of digital technologies (i.e. also human-robot systems or the use of apps in the workplace). It has the right to participate in the design of workplaces, work processes and working environments. The participation of works councils in the decision-making on digital transformation at the workplace allows them to shape the process. The interview partners from the trade unions pointed out that the members of the works councils, however, are not fully informed, mostly lack the skills required to play an essential role in the processes and are unable to assess consequences for the employees. The trade unions try to support the works councils through several actions ranging from training, checklist and information workshops to providing documents on how to formulate certain relevant issues in the workplace agreements with the employer.

1.3 The cases of Southern Europe

After the Nordic and the Continental (German) cases, another block in our study includes three Southern and Latin countries: France, Spain and Italy. There are various, significant similarities in their societies and systems of industrial relations, as well as some differences (Molina, 2014; Cruces, Alvarez, Leonardi and Trillo, 2015; Leonardi, 2016). Among the former – besides the common

linguistic, cultural and religious backgrounds – they are all *coordinated market economies*, characterised by an occupational-corporatist welfare state model (Esping-Andresen, 1990; Rodhes, 1996) ⁽⁴⁾, with some family-centered traits, in the case of Spain and even more in Italy. The respective Constitutional Charters show strong social leanings, following a shared illiberal and anti-democratic experience under fascist regimes. In all the three countries, the importance of work and labour is officially recognised: trade union freedom and pluralism have assumed different forms from in those countries where the trade union movement has been ideologically more uniform and united (Gumbrell-McCormick and Hyman, 2013). Today there are five most representative trade union confederations in France (CFDT, CGT, FO, CFE-CGC, CFTC); three in Italy (CGIL, CISL, UIL); and two in Spain (CC.OO, UGT). All three countries have experienced strong, communist-inspired trade unionism, now post-communist and still left-wing (CGIL, CGT, CC.OO), with significant repercussions on industrial relations, which are more confrontational than in countries with a social democratic and neo-corporatist tradition. This feature is facilitated by a comparatively freer right to strike, scarcely limited by law, by virtue of its constitutional nature as a fundamental individual right, engaged in collectively. As a consequence of these variables, these countries have historically been at the top of international rankings on industrial conflict and trade union mobilisation. Over time, the number and intensity of strikes has decreased on average, increasingly reflecting the ‘tertiarisation’ of industrial conflict, especially in the public sector and services, where more or less stringent self-regulatory codes in case of strike usually apply. Recourse to general strikes of a political nature, against the government policies, is more common here than in other EU member states, as with the extraordinary wave of protests that took place in France, in 2023, against the retirement age reform.

Neo-corporatist developments have long been absent in this area or are much weaker than in continental and Nordic countries, as most of the ideal-typical requisites of that model were missing (Schmitter and Lembruch, 1979). Nevertheless, and may be surprisingly, these development emerged here with starting in the early 1990s, just when declining in some of the historical bastions of the North (Crouch, 1998; Grote and Schmitter, 1999), with the frequent signature of important social pacts and framework agreements – both tripartite and/or bipartite – mostly in Spain, where they’re still a true pillar of the industrial relations; in Italy, where the tripartite pacts of the 1990s paved the way to cross-sectoral and inter-confederal agreements; to a lesser extent in France, with no infrequent divisions across some of the main unions.

Workers’ participation and trade union co-determination in companies, although mentioned and incentivised in the Constitution of all three countries (1946; 1948; 1978), have historically been much more limited and circumscribed than in Germany and in the Nordic countries (Conchon, 2011).

4. It’s worth to note that France, usually considered ‘Southern’ in the literature about industrial relations, is grouped in the ‘Continental’ in the one about welfare state (Esping-Andresen, 1990; Rodhes, 1996).

This was also due to strong cultural and ideological reluctance from both the social partners to take this on as a pillar of industrial relations. In France, minority worker presence is expected on the boards of public and large companies, in Spain in publicly-owned companies only, and in Italy not at all, and the participatory system mostly consists of information and consultation rights, legally and/or collectively agreed, at sectoral and company level (Leonardi and Gottardi, 2019).

In all the three systems, collective bargaining has a two-tier structure; the national industry-wide agreement is the predominant level, above the company or territorial level. In all three countries, collective bargaining coverage is among the highest in the EU: over 80% (Rehfeldt and Vincent, 2023; Rodriguez, Rojo, Lucio, 2023; Leonardi and Pedersini, 2023) ⁽⁵⁾. This result is achieved by various means. France and Spain have administrative extension mechanisms, in accordance with the *erga omnes* principle; in Italy, there is a jurisprudential practice, based on a broad interpretation of the Constitutional principles of 'proportional' and 'sufficient' remuneration, and the pay-scale set in each sectoral agreement is taken as a benchmark. Decentralised bargaining mainly happens in medium-large companies only. This is a serious problem for countries like Italy and Spain, where the average size of companies is pretty small and with no worker reps to negotiate. In Italy and in Spain, territorial bargaining plays an important role; in Italy, it is an alternative to the firm-level, in sectors and branches where firms are generally small and/or there are large numbers of discontinuous jobs (craft, construction, hospitality, agriculture). In France, the law requires companies with over 50 employees to periodically negotiate wages and working hours. In general, the power for company-level agreements to deviate or derogate, in the worst case, from the national sector, is growing across the board.

In all three systems, the organisation of work and the management of technological change are eminently matters for decentralised collective bargaining.

In the last 10-15 years, and especially during the financial crisis of 2008-12, the two-tier coordinated system came under pressure from the governments and the EU institutions, with the Semester and Country-specific Recommendations (Marginson, 2014; Van Gyes and Schulten, 2015). There was a big push towards greater decentralisation of collective bargaining, expanding the firm-level, strictly linked to productivity growth, at the expense of the traditional predominance of multi-employer industry-wide agreements ⁽⁶⁾. Nevertheless, despite all the attempts made in these years, the three national collective bargaining systems can be considered as still coordinated and organized, as the national and multi-employer level plays a key and resilient role (Leonardi and Pedersini, 2018) ⁽⁷⁾.

5. 80% in Spain and Italy, 98% in France.

6. Examples of this include the 'El Kohmry Law' (2016) and 'Macron Ordinances' (2017) in France; the Berlusconi-Sacconi Law (2011) and Renzi's 'Jobs Act' (2014) in Italy; the various Royal Decrees, between 2010 and 2012, in Spain.

7. Worthy to note that Italy currently has a problem of abnormal growth in the number of national agreements signed by associations which are barely representative, if at all, pushing out 'lead' agreements

It is important both in quantitative (coverage) and qualitative terms, due to its power to address some of the most crucial topics, such as wages, job classification, thresholds and ceilings in using atypical workers, bilateral bodies and funds on occupational welfare and training (the French '*paritarisme*'; the Italian '*bilateralismo*').

While these are all relative similarities, there are also important differences between these countries. The relationship between state interventionism and the degree of voluntarism, first of all, is very different. The former is traditionally very important in France, and partly too in Spain, whereas it is very weak – with the exception of the public sector – in the Italian system, with virtually full collective autonomy on all the main industrial relations issues. Spain and France have both a statutory minimum wage and erga omnes extension mechanisms; Italy has neither of these.

The rate of unionisation across the three is also very different: higher in Italy (32%), lower in Spain (13%) and traditionally very low in France (9%) ⁽⁸⁾. In Italy and Spain, public sector unionisation is on average higher than in the private sector, more than double the rate in France (over 20%). France and Spain have a dual system of workplace representation; for all employees and for trade union members only; with relative specialisation, between participatory and contractual powers. In Italy there is a single channel, elected by both members and non-members, with both participatory and contractual prerogatives.

Digitalisation is progressively gaining ground in all three countries, in collective bargaining at all levels, and in the strategies of trade unions. The pandemic crisis has enormously accelerated the processes, through rapid growth of remote work, or teleworking from home, particularly widespread in public administrations and in some service sectors, such as banking, schools and universities (De Sario, Di Nunzio, Leonardi, 2021; Rocha Sánchez and de la Fuente Sanz, 2018; Gallego Moya, 2022; Fleury, Rémond et Rustique, 2022). Cross-sectoral and sectoral framework agreements have been used to regulate this critical transformation everywhere, in some cases together with legal and administrative implemented acts. The European level has also provided momentum, as in the case of the social partners framework agreement on digitalisation (June, 2020). Today, more and more collective agreements, at industry-wide, company or territorial levels, are confronted with the issue of digitalisation. Where it has not already achieved formal and regulatory recognition in the texts, it is certainly on the agenda for upcoming renewals.

subscribed to by the largest and most genuine organisations, and creating dangerous downward pressure in favour of wage and contractual dumping; especially in private services with a low level of union membership.

8. These data are taken from the three national chapters in Waddington, Muller, Vandaele, 2023 and are updated to 2019.

With regard to tele-, remote or smart-working, trade unions are calling for guarantees regarding health and safety, psycho-physical well-being at work, the right to disconnect and to socialize, return to the workplace for one or more days a week, and trade union rights through new digital tools.

On the ongoing challenges, most people in all the unions recognize the undeniable benefits of digitalisation for society as a whole, and for workers in particular. For example, there will be new knowledge-based skills and jobs, with greater possibilities for individuals and teams to organise their own work tasks and processes. However, there are also serious concerns about the risks for employment, the balance between job gains and losses, a new digital Taylorism, intensification and extension of working time, new invasiveness in the most personal sphere of workers' life, individualisation and de-socialisation of work, lack of mediation and weakening of collective and trade union power. These analyses and criticisms are predictably more common in the more radical sectors of these trade unions; in particular in the French CGT, but also, albeit with less impetus, in some fractions of the Italian CGIL and the Spanish CC.OO.

Overall, however, the official strategic stance of the trade union confederations is not to hinder these processes, but to require companies to negotiate change and its implementation with the workers' representatives in advance, in order to mitigate its quantitative impact (on employment) and qualitative effects (on workers' conditions and lives) (CFDT, CFTC, UNSA, 2020; CCOO, 2020; UGT-FICA, CCOO Industria, 2022; DIGIT@UIL, 2017; Gramolati and Sateriale, 2019). This requires the achievement of some fundamental aims, like enhanced social dialogue and collective bargaining; strengthening of information and consultation rights; assessment of the public-private relationship; data protection.

1.4 The two countries of Central and Eastern Europe

Two countries, Poland and Hungary, complete our comparative overview, in the geo-political area of Central and Eastern Europe (CEE). They evidently share a number of features (Bernaciak and Kahancova, 2017; Czarzasty, 2020): a historical background under Soviet-style state socialism, with its numerous economic, societal and political implications. Having joined the EU in 2004, they had to quickly overcome a number of significant gaps, from several different points of view. They did so by opting for a distinct *liberal market economy* model, with weakened individual and collective rights and guarantees for workers. In terms of the relationship between the role of the state and the collective autonomy of the social partners, these CEECs have what can be considered a 'hybrid' model. Labour codes and ad hoc legislation define most of the rules that regulate individual and collective labour relations. Tripartitism and consultation forums are formally very strong in both countries and, in Poland, especially in the public sector, unlike the private sector, where a pluralistic approach clearly prevails. Since 2015, Poland has had a Social Dialogue Council (RDS), with various tasks including to update the statutory minimum wage. In Hungary there are three forums, at a macro-sectoral level; two of which concern the public sector and civil servants. All issues relating to

work, wages and employment pass through these national consultation forums. Their function tends to replace the role of bipartite sectoral and cross-sectoral collective bargaining in most countries of Central Western Europe. However – behind and despite the appearance of tripartitism – there is substantial and de facto government unilateralism. These systems have been described as ‘P.R. corporatism’, whereas others speak of ‘neo-etatism’.

The social partners are very weak. As in almost all the CEECs, unionisation rates here too are some of the lowest in the EU: 13% in Poland and 8% in Hungary⁹; with higher levels in only some segments of the public sector. These figures undermine the social and political legitimacy of these organisations. Furthermore, the national trade union landscape is quite fragmented. In both countries, the trade union movement is divided along political and sectoral lines. In Poland there are three most representative trade union confederations (NSZZ ‘Solidarnosc’, All-Poland Alliance of Trade Unions – OPZZ, and the Trade Unions Forum-FZZ) (Czarzasty and Mrozowicki, 2023); in Hungary five (MSZOSZ, ASZSZ, ESZT, MOSZ, SZEF). Especially in Hungary, the confederations have relatively little organisational and political authority over their affiliated unions (Meszmann and Szabo, 2023). The employers’ confederations are not properly structured in industry-wide federations, so that sectoral collective agreements at the multi-employer level are extremely rare.

These two CEECs have very weak, decentralised and disorganised systems of collective bargaining. The predominant type of collective bargaining is single-employer bargaining. National industry-wide collective agreements are extremely rare and exist only in some sectors. In Poland, but not in Hungary, they cover a large part of the public sector, about one million out of a total, including the private sector, of 1.9 million. As a consequence of these accumulated weaknesses, collective bargaining coverage, in both countries, is among the lowest in the EU and in constant decline: no more than 20% either in Poland and Hungary, but according to informal but more updated sources even less. From these starting points, the new Directive 2022/2041 on adequate minimum wages in the EU, with its aim to strengthen collective bargaining and reach 80% coverage, is going to be a considerable challenge for both countries in the coming years.

As regards the issue of digitalisation, major changes are occurring, even in these two countries, at workplaces and offices. Within the social dialogue, some first steps are taking place, thanks also to support from the EU level, such as the framework agreement on digitalisation, which has opened up a discussion regarding its national implementation. Seminars, studies, surveys and discussions are underway, and the trade unions seem very active on this issue. In Hungary, the Government has launched a Digital Workforce Programme, which highlights the lack of adequate digital skills in the national labour market. In Poland, in 2021, the government announced its intention to pass a new

9. These data are taken from the three national chapters in Waddington, Muller and Vandaele, 2023 and are updated to 2019.

law to add teleworking to the Labour Code as a permanent option. The attempts underway today aim to stabilise, also in legislation, the expansion of this way of working, widely adopted in 2020 during the critical months of the pandemic, and now much appreciated by workers and employers.

In neither of these countries has the digital transition yet been placed on the negotiating agenda for collective bargaining, especially not in Poland. In Hungary, there is a certain interest, at least at the workplace level. Hungarian trade unions emphasize the importance of training and the development of digital skills. Their demands include timely recognition of labour market transition and reduction of its negative consequences. In particular, they are calling for better management of planned redundancies and the promotion of adaptation opportunities for the ageing working population. In addition, they are demanding new protection in labour law for the new forms of employment (e.g. platform workers), increased support for research and development, and in particular innovation programmers, as well as greater attention to the growing psychosocial risks, ensuring the right conditions for mental well-being.

Table 1. Some key indicators of the national industrial relations systems

Country	Statutory Minimum Wage (2023)	Extension mechanism	Predominant level in CB	CB coverage (2019)	Trade union density (2019)
Denmark	No	No	Sector	83%	64%
Finland	No	Frequently	Sector	89%	60%
Germany	12,00€	Limited	Sector	51%	16%
France	11,27€	Frequently	Mixed	98%	9%
Italy	No	No	Sector	98%	32%
Spain	6,55€	Frequently	Sector	80%	13%
Poland	4,30€	Rarely	Company	20%	12%
Hungary	3,41€	Rarely	Company Individual	22%	8%

Source: Author's own elaborations from the ETUI Policy Briefs (Muller, 2023) and from the national chapters in Waddington, Muller and Vandaele (2023).

SECTION 2. IMPACT OF DIGITALISATION ON SOCIAL DIALOGUE IN THE ELECTRICITY PRODUCTION AND SUPPLY SECTOR

2.1 The two Nordic countries

Both Finland and Denmark are having to face the severe consequences of the ongoing Russian war against Ukraine, encouraging an acceleration of new ways of producing electricity, moving away from fossil-fuel based electricity production. This is a 'green transition' to which the Nordic countries were already very much committed even before the war.

In Finland, workers in this sector belong to various trade unions: the union representing the electricity sector (Sähköliitto, the biggest union, with about 35,000 members) or the union for the municipalities or other public sectors (JHL), linked to the distribution of energy. These two unions used to conduct negotiations together with the employers, who have three major associations in the sector, including PALTA and STTA. Over the years, collective bargaining in this sector has gradually moved away from its traditional centralisation, with a growing importance of smaller branches and individual companies.

In Denmark too, workers in this sector belong to different unions and fields of collective bargaining. There are various sectoral agreements: one for the industrial branch, with the employers' association TEKNIQ, and another for municipal companies, with the former gradually becoming more important than the latter. Shop stewards negotiate locally, where a broad range of collective agreements exist. Collective bargaining coverage in this sector is de facto close to 100%.

In Finland, digitalisation is not yet an issue in the collective agreements. The term, like 'telework', is not used in the texts at all. However, digitalisation and telework are covered indirectly, in the bargaining on topics such as working hours, wages, skills development, continuous training, health and safety at work. It is worth noting that there is now a *joint memorandum of agreement on digitalisation*, which covers the electrical workers' union, via JHL. The situation is quite different in Denmark, where the introduction and impact of new digital tools, with possible solutions, are currently discussed during collective bargaining rounds with the employers' association TEKNIQ. The tripartite *Danish Authority for the Work Environment* also addresses specific issues relating to the electricity sector.

In Finland, the trade union approach to digitalisation is to introduce it as a permanent subject of discussion and negotiation at all levels; central, branch and enterprise. A common aim should be to break down boundaries between energy sectors and enable integration and cooperation between various actors and systems. In Denmark, trade unions take digital and technological development very seriously, trying to address these challenges to form new and better forms of work organisation. However, cooperative forums at workplace level are preferred, for this purpose, to collective

bargaining. Unions want to keep wage and growth negotiations separate from discussions on digital challenges. The level of cooperation between workers and employers is considered good, also on digitalisation. Bi-partite and tripartite committees at national level also play an important role.

2.2 The Continental model: the German case

The main German trade unions in the electrical sector are ver.di, IG BCE and IG Metall. The employees of the municipal utilities are mostly represented by ver.di. In recent years, there has been strong competition between the trade unions to recruit new members, so that the traditional distinction between the areas of competence of the trade unions is blurring. The level of workforce organisation is rising but is still at low levels. For example, there is no collective agreement in most of the companies in the wind energy sector.

Collective bargaining in the electrical sector takes place at various levels: sectorial and single employer. A key role is played by the major producers, such as RWE, E.ON/Tennet, AVEU and AVE. Municipal utilities may be public or mixed-economy enterprises, majority-owned by one or more municipalities. The major producers have recently concluded collective wage agreements for their companies, in place in 2022. Germany's IG Metall trade union has reached an agreement with employers to boost pay for metal and electrical workers by 8.5% over two years, to take the sting out of decades-high inflation in the country. Employees of municipal utilities are generally paid according to the collective agreement for utilities (TV-V) and are represented by ver.di.

According to the latest IAB data from 2021, 66% of employees were covered by a sectoral collective agreement in the energy, water supply, waste disposal and mining sectors, and 5% by a company-level agreement. Almost 30% of employees are not covered by any collective bargaining. 66% is much higher than the general average value in other sectors (43%).

Mobile work, in this sector, is limited in scope. It is mostly employees with commercial and administrative tasks, who already work digitally, who perform mobile work, while it is not common in the production or in the plants. Agreements are reached at the company level, in cooperation with the employers, but not in collective bargaining.

The unions in this industry have highlighted the advantages and pitfalls of the digital transformation in Germany. They point out that IT and telecommunications skills are gaining in importance and wish to foster a debate on future skills needs in energy companies. Alongside IG Metall, ver.di additionally criticizes the 'poor' collective agreements and co-determination structures in companies, especially in the renewable energy sector ⁽¹⁰⁾.

10. Whilst ver.di wants to launch a campaign to extend the usual collectively agreed standards and co-determination rights of the energy industry to the renewable energy sector, IG Metall is calling for the

During the Covid-19 pandemic, some developments accelerated even further, such as working from home. Trade unions stress the importance of the issues related to the regulation of remote working, such as the right to disconnect, the work-life balance, privacy issues, monitoring, work intensification, increasing stress, and the blurring of boundaries between work and private life at a time when workers are constantly connected. Unions try to support workers in the digital transformation, with workshops and seminars, as well as publications to provide comprehensive information and advisory services for their members. In addition, there are brochures and guides on digital practices in the workplace. Recently, ver.di has adopted guidelines on the ethical and good design of digitalisation and on the use of artificial intelligence. The main challenges for the trade unions and representation in general are, in their view, how to shape developments to maintain 'good work', with company agreements, with collective agreements, and with solidarity among employees.

The war in Ukraine is now having quite serious effects on the energy industry, not only in the form of massively increased electricity bills, but also and especially with regard to discussions on the security of the supply chain in electricity production. Due to such upheavals and unforeseen events, the sector is now confronted with new challenges. Trade unions focus strongly on the risks facing certain industries and citizen groups with respect to rising energy prices and potential supply shortages. These issues have risen to the top of the daily agenda of the trade unions, although they are still concerned about the digital transformation and the issues associated with it. External events such as the recent ongoing war have shown the susceptibility and vulnerability of the energy supply sector. This may result in new restructuring of the sector in the near future, with respect to energy suppliers and distribution companies.

2.3 The cases in Southern Europe

In France and Italy, the electricity sector has for decades displayed an almost monopolistic predominance of nationalised (1944 in Spain; 1946 in France; 1962 in Italy) or semi-public owned companies, such as EDF and Gaz de France (GDF) in France, ENEL in Italy. These are multinational corporations with particularly high levels of unionisation and more advanced collective bargaining practices than in the rest of the country. In these companies, the top management is often politically appointed, with a HRM culture and style more open to inclusive and participatory approaches in industrial relations.

In Italy, the past predominance of ENEL has impacted the quality of industrial relations for the whole sector: it has often been the first to adopt innovations that were later on implemented at the national

conclusion of separate collective agreements in the renewable energy sector, e.g. a sectoral collective agreement for the solar industry.

industry-wide level, on, for instance, issues such as joint committees and information and consultation rights. Both in France and in Italy, the national energy champions are very actively engaged in transnational company agreements, and have signed several at the European and global level.

All three countries, including Spain, have experienced liberalisation and privatisation processes in the last 20 years, but with quite limited repercussions on the quality of industrial relations. In France, the law of 2000 on modernisation and development of the public electricity service set the conditions for opening up the market to competition, and at the same time launched negotiations in the Energy and Gas (E&G) professional branch. Profits, usually high and extremely high in the last year, certainly facilitate more generous agreements and concessions from the corporate side.

In Italy, the electricity sector – like all the others – is covered by two levels of collective bargaining: national industry-wide ⁽¹¹⁾ and company/workplace. The national collective agreement lasts three years and covers approximately 60,000 employees and 130 enterprises: the whole sectoral workforce. The last one was renewed in July 2022. Considerable attention is paid to the ‘just transition’, with a broad focus on worker participation, traditionally considered a feature of industrial relations in this sector ⁽¹²⁾.

In France too, there are two collective bargaining levels, which cover 157 companies. EDF and GDF alone, however, represent 93% of the entire sector.

The situation is different in Spain, where at the moment there is no national collective framework agreement for the electricity or energy sector. Working conditions are therefore regulated at the company level. In Endesa, the last collective agreement was signed in 2020, and bears the signature of UGT only, on the side of the unions. Nowadays, there is no virtually electricity sector in Spain (Currently, the only significant company that is partially public is Red Eléctrica (20%), with 2,000 employees. Two more are part of SEPI (*Sociedad Estatal de Participaciones Industriales*): Enusa (100%), with 664 employees and Ensa (100%), with about 500 employees)

With regard to the role and importance attached to digitalisation in collective bargaining, in France, this issue has rarely been discussed, up to now, by the social partners. There are no sectoral

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11. In Italy, the employers’ side includes the associations of the large companies, such as ‘*Eletricità Futura*’, which belongs to Confindustria, the largest umbrella confederation of private manufacturing employers, and ‘*Utilitaria*’, which represents public or private sector multi-utility companies, and which mainly operates in sale and distribution on local networks, as a result of the liberalisation process.
 12. On the economic side, it foresees an average increase in the minimum wage of 225 euros, distributed in four tranches between 2022 and 2024. The total amount over the duration of the contract will be €4,740, with an overall increase of 9%, according to the provisions of ISTAT, in relation to the HICP, without the cost of imported energy goods, during the term of the contract.

agreements on the right to disconnect, teleworking or other related issues. Instead, there are some company-level agreements, such as the recent TAMA ⁽¹³⁾ agreement in EDF (2022-25), which defines the new uses of teleworking, regulates the right to disconnect, digital training and the introduction of new digital technologies. In ENEDIS there is a 2021 agreement on teleworking and another in 2022 on the right to disconnect. Nonetheless, few measures have been implemented to mitigate the negative effects of digitalisation on employment. In France, trade unions aim to cushion the effects of digital changes on the quality of work and are proposing an ex- ante approach to digital tools and their impacts, in order to assess the efficiency gains of the tool, as well as its effects on employment. These gains could then be redistributed in monetary form, or to improve quality of life at work. Added to this is an ex-post approach to job reclassification. Finally, they are demanding changes to the legislation, given the risk of digital Taylorism and the impact on health and safety at work. The French trade unions in the sector are demanding that burnout be classified as a work accident / disease.

In Italy, collective bargaining has so far assigned a secondary role to this issue, although both the latest ENEL and sectoral agreements, signed in 2022, mention it. The key topic at the moment is regulation of what in Italy is called 'agile' or 'smart' work, always adopted by choice of the individual, as well as the right to disconnect, the work-life balance and guarantees concerning employees' privacy. Great emphasis is also being placed on a new job classification system, reflecting the digital changes that have taken place. Both the national and the ENEL agreement have introduced an important new idea: the '*Statute of the person*', based on the quality of work and well-being at work. In order to achieve both these ideals, a new impulse is being given to the continuous training of personnel, understood as a 'subjective right' of each individual worker.

In Spain, the privatised electricity company organises employment relationships and industrial relations in compliance with the legal framework of the Workers' Statute, with the traditional dual system of workforce representation, flanked by other joint participation structures, such as the structure for occupational health and safety. The issue of digitalisation is not yet addressed in a specific chapter or clause of the agreements, but indirectly it is alluded to with regard to, for example, the retirement system for staff who would find it too difficult to adapt to digital changes, monitoring of working hours, telework and the right to disconnect.

2.3 The two countries of Central-Eastern Europe

In Poland, the electricity and energy sector is one of the few sectors where industrial relations are quite advanced and well structured. There are four major companies operating in the country (PGE, Tauron, Enea, Energa) and in each of them the unions affiliated to the three major national confederations are present, with their respective approaches, stemming from their different attitudes

13. TAMA (Travailler Autrement, Manager Autrement).

and ideological orientations. The unionisation rate in this sector is significantly higher than the national average. All four companies mentioned, with 40 related companies, are affiliated to the only employers' association, the ZPEP, which thus covers over 90% of the entire workforce in the sector. However, this does not result in one single national industrial agreement, which was the case before the old employers' association ZPEC was liquidated and replaced by the ZPEP: the latter, evidently, does not intend to establish this level of negotiation.

Also in Hungary, the energy industry sector stands out as having a better quality of industrial relations than most other sectors, private and above all public. Wage and social agreements are negotiated every year. The union also has a strike code. The sectoral collective agreement, established with the help of the EVDSZ, is one of the few that offers workers protection extended nationally by the Minister of Labour. It regulates the most important conditions of employment, in particular wages and benefits. In addition, the collective agreements concluded at individual workplaces – local collective agreements – and the annual wage and social agreements are extremely important. In addition, a number of other agreements are concluded with the employers' organisation to protect workers and jobs in the interest forum. That sectoral agreement is signed by the federation of united electrical workers (EVDSZ) which, founded in 1990, now has 25 sectoral unions as affiliates. The federation already considers it important to be involved in international trade union activities and in the work of the European Works Councils (EWCs), but even more so since accession to the European Union. Bilateral contacts with national trade unions, and participation in the work of European trade union federations, both IndustriAll and EPSU, are important. It is also involved in the European Social Dialogue Committee, as a partner of EURELECTRIC.

In Poland, digitalisation in this sector is essentially pushed forward by the managerial level but is generally supported by trade unions and also by workers. It is considered as a new stage in the modernisation of the sector, necessary to ensure a higher quality of an important public service to the citizens, also with respect to the country's critical issues concerning the network infrastructure.

In Hungary, no references are yet made to technological change in the texts of sectoral and company level collective agreements. The only exceptions are some agreements signed by the social partners during the most critical phase of the Covid-19 pandemic, regarding teleworking, working from home and distance learning. The most heavily debated topics, with some ongoing debate, include the problem of health insurance, which is not mandatory and which, if established, could lead to greater awareness of the physical and mental problems suffered by workers, in terms of exhaustion and social isolation.

The Polish trade unions see more advantages than disadvantages in digitalisation; especially with regard to working conditions. Nor are they afraid of the possible consequences in terms of the loss of jobs. Rather, they think that in this way the average qualification level of workers, and with it of

wages, can be increased. Obviously, they consider investment in continuing education to be a prerequisite for further moves in this direction. However, they do not consider it necessary at this stage for this issue to become a specific subject for collective negotiation. At the moment, they seem to trust the employers' initiative in this regard, preferring to focus on other issues, such as wages and the implementation of the European Green Deal. Confirming the supremacy of legislation over all the labour law issues in Poland, a law of 2018 regulates workers' privacy rights, whereas some joint documents are beginning to address the issue of digitalisation and its consequences.

The situation in Hungary is slightly different. Here the trade unions – aware of the importance that digitalisation is taking on in work processes – are not at all ruling out inclusion of this issue in the collective bargaining agenda. Some criticisms are voiced regarding the working conditions; for example, the time spent in front of a computer monitor, with the psycho-physical stress that this entails. There is growing awareness of the various aspects that make up the quality of work and its effects on workers. For example, more attention is now paid to the food served in company canteens, and the prevention and diagnosis role of occupational doctors has been expanded.

SECTION 3. IMPACT OF DIGITALISATION ON SOCIAL DIALOGUE IN THE PUBLIC ADMINISTRATION SECTOR

3.1 The two Nordic countries

In the past, civil servants did not have the same trade union rights as their private sector colleagues, for example the right to strike and to negotiate collective agreements. In return, they had good wages and working conditions and were more or less guaranteed life-long employment stability. Since the 1970s – as in the case of Denmark – things have changed, and both of these rights – to strike and collective bargaining – are part of the normal practice of industrial relations in the public sector. There are still jobs which, due to the nature of their functions and responsibilities, are still subject to a different employment regime, with specific laws for civil servants.

Both in Finland and Denmark, the public sector has even higher rates of unionisation than the already high national average, with diversified membership of the main confederations, according to employees' branch and profession, as is typical of the Nordic model of trade unionism.

In both systems, collective bargaining in this sector is intense and structured into levels; national, regional, municipal. In Denmark, collective agreements are negotiated at three levels: state, region and municipal, covering local public workers. In Finland, the national sectoral agreement is negotiated by the JHL and local government representatives, or between the JHL and the employers' association PALTA, representing the service sector employers.

Both in Finland and in Denmark, collective bargaining coverage, in the sector, is close to 100%.

In both countries, conflict and disputes tend now to occur more often in the public than in the private sector. In Finland, the situation has taken on rather harsh contours, during the year 2022, in the hospital and healthcare sector. Even in Denmark, where the public sector is becoming the true core of the trade union movement, trade unions are very popular, and conflicts in this sector also occur more frequently than in other sectors.

Digitalisation is not perceived as a threat by Finnish public sector unions. On the contrary, its advantages are emphasised in terms of more direct and easier communication between the union representatives and individual employees. Also in Denmark, trade unionists from the public sector assess positively the digital transformation of work organisation. They rely on the traditional approach to facing and resolving problems with their counterparts in a cooperative and informal way, as well as using traditional contractual methods. The texts of collective agreements in this sector, therefore, do not mention digitalisation as such. However, there are indirect references, as in the case of the 'Competence Funds', aimed at helping workers to improve their digital skills. In general, both in Finland and in Denmark, the issue is much debated but the impact of digitalisation

on working life and conditions tends to be handled more through a cooperative and consultative approach, often direct and informal, rather than through collective bargaining as such.

3.2 The Continental model: the German case

Public sector employees and civil servants in Germany are represented by ver.di (*Vereinte Dienstleistungsgewerkschaft*), with about two million members⁽¹⁴⁾. The most representative association for civil servants is the DBB (*Beamtenbund und Tarifunion*). Its 40 affiliated industrial and professional trade unions predominantly represent civil servants, but also employees covered by collective agreements at all levels of public service. At the end of 2018, the DBB had a combined total of 1,317,000 members.

In Germany, collective bargaining in the public sector is highly centralised, at the national level. Collective bargaining coverage (93%) and trade union density (60%) are much higher than in the private sector. This demonstrates the relative stability of industrial relations in the public sector. Nevertheless, the far-reaching privatisation and liberalisation of public services had a major impact on industrial relations and working conditions in these now private, formerly public sectors. Consequently, substantial fragmentation of the former collective bargaining system and a reduction in collective bargaining coverage as well as a deterioration of working conditions have been observed in the liberalised sectors.

Since 2003, there are two main collective agreements in the public sector. One covers employees of regional government and the other covers federal and municipal employees. Strictly speaking civil servants are not covered by collective agreements but the provisions of the agreements are normally applied to civil servants⁽¹⁵⁾.

The collective negotiations for the state and municipalities focus in particular on the pay scale. The last collective agreement for the Länder was signed in November 2021 and runs from October 2021 until September 2023. For the period 2023-24, the negotiations are not yet concluded. They apply directly to the approximately 134,000 federal government employees and more than 2.4 million employees of municipal employers united under the umbrella of the VKA.

14. We have also to mention the GEW (*Gewerkschaft Erziehung und Wissenschaft*), with about 279,000 members, and by the GdP (*Gewerkschaft der Polizei*), with about 191,000 members.

15. The Länder (States) association for collective bargaining, the TdL (*Tarifgemeinschaft deutscher Länder*), conduct collective negotiations and sign agreements independently. As a consequence of the reform of the German federal system, in 2006, the Länder are themselves responsible for regulating the working conditions of civil servants. Because of this new division of 'sovereignty', the working conditions for civil servants vary more between the federal states than in the past. The municipal employers are represented by the VKA (*Federation of Municipal Employers' Associations*).

Both ver.di and the DBB have similar arguments and demands with respect to digitalisation in the public administration. The first priority is job security, or securing an equivalent job, as well as safeguarding workers' pay and qualifications. Nobody must be downgraded from his/her current occupational status and conditions as a result of technological change ⁽¹⁶⁾.

During the Covid-19 pandemic, working from home and mobile working increased significantly. Many employees were happy to accept this, but the problems associated with mobile working have become apparent. This is also true for civil servants. In Germany, there have been no collective agreements which referred to a right to disconnect. This issue is still being discussed among the public, however, so far without any agreements concluded at national level. Stand-alone solutions prevail at the local level, with staff councils and separate units.

One recent success was the collective agreement on digitalisation, signed by the Federal Ministry of the Interior with ver.di and the DBB, in June 2021, and applicable to 126,000 employees. The Länder and municipalities, however, have so far refused such an agreement and the endeavours of the trade unions have to date been unsuccessful. This agreement regulates all the situations when relevant changes to work are on the horizon. For example, it entitles employees to training if their job changes, is discontinued, or if they have to take on a new job. The agreement contains rules that ensure job and pay security in particular:

- If digitalisation leads to changes that affect the workplace or working conditions, priority is given to securing an equivalent job.
- If a digitalisation measure results in transfer to another job that is associated with lower pay, there are long-term arrangements for personal pay protection.
- Right to training whenever the job changes as a result of digitalisation.
- Regulation of mobile working through a service agreement, including provisions on working hours, reimbursement of technology costs, and a ban on performance monitoring and behaviour control.

Based on the collective agreement on digitalisation with the Federal State, the DGB is calling on State governments and public employers to use the digitalisation of the public sector to shape good work. Digitalisation must therefore not be allowed to exacerbate existing problems. It must be designed in such a way that it does not create more work, but good work. This is not only in the

16. The DBB calls for a binding entitlement to genuine upskilling measures in order to promote forward-looking skilled employment, in terms of lifelong learning and innovation policy. The suitability of a training measure is always dependent on appropriate consideration of the compatibility of family and work. All costs related to a training measure must be borne by the employer, and all time spent on such agreed measures must be regarded as working time.

interests of employees, but also good for citizens and the economy - because it is the only way to maintain a functioning public service in the future. In several position papers and publications, ver.di and DGB stress good work aspects and call for actions to enable more participation in several issues regarding the digital transformation, with an emphasis on new digital solutions such as artificial intelligence and blockchain technologies ⁽¹⁷⁾.

The trade unions stress the importance of participation in decision making. Employees and their representatives must be involved as experts and mediators at an early stage of the digital transformation. The heads of departments and the State government must organize the participation of employees and their representatives in an orderly process right from the start, and allow for participation in the steering committees. The DGB is demanding the creation of a protective framework for employees in the public administration. Its position paper *'Employees First'*, summarises its key demands: employees must be protected from the new flexibility arising from digitalisation. Negative effects such as work pressure, increasing work intensity and problems in connection with copyright and data protection, are to be resolved through appropriate regulations and training courses. At the same time, flexible working time models that focus on the autonomy of employees need to be expanded. Occupational safety and health protection must be boosted, with financial and human resources to meet the new challenges. Employees must be provided with up-to-date work equipment. The DGB highlights that digitalisation has increased the pressure to use third-party services and products due to a lack of in-house competencies and IT personnel. The provision, quality and standard of public sector products or services are of general interest for citizens, and the state bears responsibility for them. In this context, the DGB rejects the privatisation of public tasks as a result of the digital transformation. Likewise, the state must not become so dependent on third parties that it loses control of a product coming from a specific manufacturer or is tied to support from specialist companies for digital services.

3.3 The cases in Southern Europe

In France, since the years 2010-2011, collective bargaining in the public sector has covered all aspects relating to employment and working conditions. Until then, it was limited to salaries only. There are two levels of collective bargaining: a) the national level: framework agreements (for example, the 2013 agreement on psycho-social risks) are usually negotiated at this level, and pay scales are set; b) the local decentralised level, which can adapt the more general provisions to the specific situation. National negotiations can start with a 'method agreement'. To be valid, an agreement must be approved by the majority of the signatory unions; this was a rule introduced by law in 2010 and further specified in 2019, applying also to the private sector. Since Ordinance no.

17. Similarly, the DBB aims to enter into collective bargaining with public sector employers and create reliable framework conditions for all employees, seeking to extend the scope and to incorporate further employees in this agreement.

174/2021, an agreement having the support of the majority of the signatory trade unions has a general binding effect. With a view to extending and strengthening social dialogue and collective bargaining, the same rule gives trade unions the right of initiative, entitling them to open collective bargaining on a particular issue.

In Spain, the public sector is divided into two categories of employment, which coexist and give rise to two different models of regulation. For *public employees*, the rights are regulated in the Consolidated Law on the Basic Statute for Public Employees (TREBEP), which recognizes the right to collective bargaining and participation in the determination of working conditions, regulated by the Workers' Statute. For *civil servants*, collective bargaining on working conditions takes place at negotiating tables, which are organised on three levels (state, regional, local).

In Italy, since 1993, employment relationships in the public sector are fully equivalent to those in the private sector, with the sole exclusion of some professions, such as judges or the army. Unlike the private sector, where the rules governing industrial relations are set exclusively on a voluntary basis through peak-level framework agreements, in the public sector the law plays a much more incisive role. In fact, it determines:

- a single negotiating agent, at national level, representing the public administration as an employer (called 'ARAN');
- the number of sectoral CB areas and their scope;
- the representativeness criteria and thresholds which trade unions must meet to be admitted to the negotiating tables;
- the majority principle for the approval of national agreements (50+1% of the signatory unions);
- the rules governing exercise of the right to strike in essential public services, largely applicable to the public sector (schools; hospitals) but also to some private companies (public transport of various kinds).

Collective bargaining takes place at two levels, national sectoral and local; the local level can be further divided into branch and individual work units. At the national level, the system is divided into four major contractual areas – *Central Functions* (ministries, government agencies, social protection institutions), *Local Functions* (regions, provinces, municipalities), *Public Health* and *Public Schools and Education*. The existence of only one negotiating party representing the public administration (ARAN) guarantees 100% coverage of the agreements signed. The economic resources to be allocated to the renewal of the agreements are established in the state budget laws. The two levels of negotiation are coordinated according to a principle of specialisation, with the national level taking the main role, and defining the scope for autonomous intervention in decentralised negotiations. A

trade union, to be sufficiently representative and access the national negotiating table for each sector, must exceed the threshold of a 5% weighted average between the number of registered members and the votes achieved in the national election of unitary representatives in the workplace. In the public sector, the average levels of unionisation are higher than in the private sector. In addition to the sectoral federations of the three historic trade union confederations (CGIL, CISL, UIL), there are also many, fragmented autonomous trade unions. However, generally no more than five or six unions are deemed to be representative enough to take part in the negotiations. The scope of the subjects for collective negotiation was first restricted (*Brunetta Reform, 2009*), to boost the unilateral power of public managers, and then expanded again (*Madia Reform, 2017*). Between 2010 and 2015, under pressure from the austerity measures imposed due to the financial crisis and the European guidelines at that stage, there was a freeze on collective bargaining and wages. This freeze was deemed too long, and therefore unconstitutional, by the Constitutional Court. Since 2017, the negotiation rounds have returned to normal, and since 2018 the 'Central Functions' have a new national agreement, which was renewed in January 2022.

In all the three countries, the unionisation rate among public workers is on average higher than in the private sector. This is particularly true in France, where it is more than double the national average, at approximately 20%.

Having said all that, let us now consider the growing importance of the topic of digitalisation in the sector, in the three countries. In the case of France, it has not yet been specifically mentioned in the texts of the sectoral collective agreements. The only important measure is the framework agreement on telework, signed on 13 July 2021, which affects three public sectors: the state, local authorities and the hospital sector. It limits teleworking to three days a week and contains rules on certain aspects of private life: the right to disconnect, telework from 'third places', prevention of domestic violence. However, some decrees which should have guaranteed its full implementation, have not yet been passed. In general, there is a need to deepen collective bargaining in a sector which, until recently, has lacked, relatively speaking, a broad and relevant bargaining practice. Trade unionists seem to need to improve their negotiating skills and impose new and challenging standards to force progress on workers' rights in line with their perceived needs and priorities. In particular, there is a strong need for workers to be informed before the introduction of new technology, and a precise diagnosis in a multi-challenge situation (disruptive potential of digitalisation in the sector, the impact on citizen users, the issue of data and privacy, etc.).

In Spain too, the most important area of negotiation so far has been teleworking, with a specific framework agreement, signed in April 2021. As in France, the agreement stipulates three days a week, wherever possible, always on a voluntary and reversible basis, plus rights relating to the worker's privacy. Teleworking is at the top of the union agenda. Trade union representatives criticize the fact that, so far, measures have been taken unilaterally by the government on a topic which is

at the heart of trade union concerns in the public administration, given the widespread demands of civil servants to be authorised to telework. In this sense, effective implementation of teleworking is required. Since teleworking has become very widespread in most public administrations, negotiations on agreements at different levels, and their specific implementation in the various institutions and services, have been at the centre of trade union activity. In October 2022, a new agreement was signed between the government and trade unions, in which part of wage evolution may be related to the development of the Public Administration Digitalisation Plan 2021-25. At the moment, digitalisation as such does not seem to be a central issue in collective bargaining. Rather, the focus is on job security and quality, as well as on the purchasing power of public workers at a time of high inflation rates, rising to quite unprecedented levels.

In Italy, the national agreement for the Central Functions sector, signed in January 2022, provides – among other things – clear guidelines for negotiations on remote/agile work. The agreement states that this is to be discussed and managed at a decentralised level, through the most advanced tool available in law: the ‘joint examination’. Digitalisation plays quite a central role in this. The trade unions in the sector do not seem to be on the defensive; rather, they seem to have embraced digitalisation as strategic, to improve the quality of working life, stimulate innovation within the public administration, and improve the quality of services. This notion of a potential ‘win-win-win’ logic seems to be driven by the recent experience of the Covid-19 pandemic, in which workers, forced to use new digital tools, saw - in some cases – their tasks evolve from a time-based working concept to a more results-based approach, creating new ways to deliver better services, closer to citizens.

3.4 The two countries of Central-Eastern Europe

In both Poland and Hungary, the law defines most of the rules governing individual and collective relationships in the public sector, through Labour Codes and ad hoc legislation. In Hungary, the old norms, with a single legal status for all State employees, have been amended and, since 2019, there are now two main types of public workers: *government officials*, directly employed by the State, and *civil servants*. This is a formal distinction, quite irrelevant from the point of view of trade union rights and prerogatives, which are *de facto* denied to both categories. The legal status of public workers excludes them from a type of regulation based on the principles of civil law, including collective bargaining, which plays almost no role in Poland and Hungary. The right to strike is subject to many and severe limitations, in terms of subjects, procedural constraints and prohibitions.

The Polish trade union landscape in the public sector is more fragmented than in the private sector. This is also due to the variety of branches into which the public sector is divided. In Hungary, there is one main organisation: the Trade Union of Hungarian Civil Servants and Public Workers (MKKSZ). In Poland there is no specific national association representing public employers, partly because there is no collective agreement at that level. At the decentralised and individual local level, the

counterpart of the trade unions are the representatives from the local public administration. In Poland there is no national collective bargaining for civil servants, but only some agreements signed at local level with the local public administrations. It is not surprising, then, that in this sector, collective bargaining coverage is a mere 1%.

Both in Poland and Hungary, in place of national collective bargaining, there is just a system of consultation and social dialogue, based on tripartite committees, such as the Polish Social Dialogue Council, which includes a Thematic Team for Public Services, and a consultation forum in Hungary. In Hungary, collective bargaining and collective agreements are not allowed in the sector. Workers have the right to participate in the workplace, sectoral, and national consultative forums. These forums discuss all the labour relation reforms in the pipeline, including wage increases. Despite their tripartite composition, the government representatives are dominant here too, with the unions just submitting their opinions, but no more than that, on the draft legislation.

As regards digitalisation in this sector, the Polish trade unions representing public workers are working within their national confederations to achieve a general regulation of teleworking. Overall, however, this issue is not at the top of the list of union demands, which today mainly relate to low pay, work overload, overtime, insufficient staff, especially in large cities, inadequate provision of training. In Hungary, the end of the old system of protections and guarantees for public workers, without the creation of an alternative system based on true collective bargaining similar to that in the private sector, has very much weakened the position of workers and their union representatives. Even in the most critical phase of the management of the pandemic, the government and public authorities were not particularly willing to meet the demands of the trade unions for telework. The only venues for expressing union demands are the consultative forums.

Currently, the issue of digitalisation and its consequences has not emerged as one of the most debated topics.

In Hungary, the issue of digitalisation came to the attention of the public service trade unions in connection with the pandemic, through the working-from-home rules. Unfortunately, as we have seen, they were not able to have an effective say in the development of the regulations. The MKKSZ civil servants' union would like workers to have a right to decide whether the concept of working from home should be enshrined in the Constitution. To sum up, as things stand, neither collective bargaining nor consultative forums are functioning effectively in the Hungarian public administration. In Hungary the challenges of digitalisation are not a key focus of the attention, programmes or activities of trade unions in the public administration.

SECTION 4. IMPACT OF DIGITALISATION ON SOCIAL DIALOGUE IN THE HOSPITAL AND HEALTH SECTOR

4. 1 The two Nordic countries

In Finland, negotiations regarding wages in this sector have traditionally been centralised, but with increasing variation at the municipal level. Once the highest level has set the basic pay rates and their increases, further negotiations take place at a lower level and in smaller units in the municipalities and counties. This structure has led the Finnish government to adopt a reform (known as the 'Sote reform'). The SOTE reform is a sound reshaping of the whole organisation of Finnish welfare, with transfer of competences from the municipalities to the newly created 'welfare counties'. Among its aims there is to homogenize wages and salaries across the welfare counties. Salaries in the public social and health sectors are lower than for private sector occupations with similar levels of education and qualifications, for example the pay of nurses, for whom a lower tertiary level diploma is required. Furthermore, experienced nurses now often carry out tasks in hospitals that were previously the responsibility only of medical doctors. Today, the issue of wages, and their growth, is at the heart of union demands. The sectoral organisations have been demanding 3.6% increases in annual salaries for five consecutive years, in addition to the usual increases. These demands are also motivated by a comparison between the current level of wages and the greater workload due to the Covid-19 crisis. The situation became quite tense and the unions decided to start a series of industrial actions, until an agreement was reached in October 2022.

In these circumstances, digitalisation was and is a secondary issue. In addition to wage levels, in fact, the other major problem in this sector, lamented by workers and their unions, is the shortage of labour. Today, the main preoccupations and questions for the Finnish unions in this sector concern the impact of the 'Sote Reform', and in particular, the future of smaller hospitals and the aim of evening out salaries between different sectors and actors, between and within the counties.

In Denmark, collective bargaining applies to the whole sector. However, it takes place at regional level, where the public hospitals are managed, with a unitary bargaining body for all trade unions in the sector, in bi- or triannual negotiation rounds. Collective bargaining coverage in Danish public hospitals is in practice 100%. Higher-level negotiations mean that an individual union cannot increase its own wage share in direct negotiations. In spite of that, the CB system is beginning to suffer from a certain unevenness of treatment, across the various local standards and occupations, resulting in a rather complex picture, also from the point of view of the public sector management. Today, there is some industrial conflict in the Danish hospital sector. The white-collar and public workers unions, over the last decades, have been some of the more active and militant unions. The nurses' union (DSR, Danish Nurses' Union), for instance, has been adopting a quite on-attach approach, with wild-cat unrest and planned unrest.

Also in Denmark, the main problem at the moment is the wage levels of nursing staff. The old higher-level and cross-occupation wage negotiations, once designed to achieve generalised improvements, seem to have penalised and frustrated nurses. Their union is calling for an upward adjustment of their wages. Here too, as in Finland, the work overload and recognition from society during the pandemic have resulted in greater self-awareness, and a general call for a wage increase. This demand has weakened the close bond with other groups of workers, such as care workers and health assistants; tensions have arisen between their unions, and the nurses have been accused of lacking solidarity.

Little attention is paid to digitalisation in national collective bargaining. A general agreement dating back to 1986, signed by the Danish Trade Union Confederation (FH) and the Confederation of Danish Employers (DA), anticipated some issues. New technologies need to be discussed with the shop stewards before being implemented, regarding their potential impact on working conditions. Today in some hospitals, only at the local level, the social partners have drawn up a policy paper on related topics. In Denmark, as we have reported in the general section and in the presentation of the two other sectors, the topic of digitalisation is more readily dealt with in cooperation committees, at various levels, rather than through the collective bargaining system. In general, the trade unionists interviewed expressed a good level of satisfaction about the possibilities for influencing the impact of digitalisation. However, they would like to be even more included. When this is not the case, it is because of the managers' rush to adopt changes. Time and resources are indeed needed to achieve adequate trade union involvement.

4.2 The Continental model: the German case

In the German hospital sector, Ver.di is by far the largest union, covering all types of hospital providers⁽¹⁸⁾. For special occupations, such as doctors, the *Marburger Bund* has, since the mid-2000s, negotiated separate collective agreements. The *Marburger Bund* negotiates collective bargaining agreements with the federal states (TdL) for the university hospitals, with the municipalities for the municipal hospitals and with private hospital groups. In contrast to trade unions, which often represent employees in the public and private sectors, employer organisations are usually divided into private and public providers of health care services. In the past, trade unions have conducted various campaigns against the privatisation and commercialisation of hospitals, without success.

In Germany, labour and industrial relations in the hospital sector suffer from a 'triple fragmentation' (Schulten and Böhlke, 2009): 1) the three-fold ownership structure – public, non-profit, for profit –

18. Other trade unions in the healthcare sector are the Civil Servants' Federation and Tariff Union (DBB) and the Christian Trade Union Federation (CGB). Within the CGB, DHV is the professional union, with 65,000 members, representing among others the interests of the health care and welfare sector.

the central line of differentiation; 2) the divide between core staff and outsourced work areas; 3) various professional groups, such as physicians, nursing staff and other employees. Consequently, collective bargaining in the sector varies according to how these elements intersect. We will now examine the system in more detail, starting with the three-fold ownership structure:

- The public hospitals (including the municipal and university clinics belonging to the Länder) are covered by the Collective Agreement for the Public Sector (TVöD) and of the Federal States (TV-L), which both include some special provisions for hospital staff, including a special pay-scale for care workers.
- Most of the non-profit hospitals adhere to the particular industrial relations regime that operates within organisations run by the Christian churches, closely guided by public sector collective agreements, although this connection has become somewhat looser. Other welfare organisations have their own company agreements, whereas the church-run hospitals have 'in-house arrangements'
- The private for-profit hospitals have also developed their own industrial relations regimes. Since privatisation, the companies have largely withdrawn from the public sector agreements in order to undercut existing labour standards. The agreements cover the clinics separately, or whole clinics in hospital co-operations, or they may cover only the regional or local level. There are also some private hospitals that still refuse to sign any collective agreements.

In the public hospitals, collective bargaining takes place almost exclusively at the state and local level. The employer associations, in these cases, are the *Vereinigung Kommunaler Arbeitgeberverbände* (VKA) and the *Tarifgemeinschaft deutscher Länder* (TdL).

Table 2. Collective bargaining structure in the German hospital sector, 2018

Hospital provider	Collective agreements
Public	Nationwide public sector collective agreements for municipalities federal states
Non-profit	'In-house arrangements' (church-run hospitals) Company agreements (other welfare organisations)
Private for-profit	Company agreements for entire hospital corporation at national level individual clinics at regional or local level No collective agreement

Source: Schulten 2019, based on WSI Collective Agreement Archive, 2018.

The fragmentation sketched out above makes it difficult to secure equal conditions for all hospital workers. The unions have tried to ensure that the growing number of private for-profit hospitals are

covered by collective bargaining and provide similar conditions to those laid down in the public sector collective agreement. In view of the growing competition between hospital providers, there is also a need to establish a level playing field, in order to prevent downward pressure on working conditions. As a consequence, the trade unions have tried to co-ordinate collective bargaining between all hospital providers and establish public sector conditions as the benchmark for all hospitals.

The main problems today, at the heart of trade union demands and aggravated during the pandemic period, are the staff shortages in hospitals, associated with work intensification and inadequate pay levels, especially for care staff and nurses.

Generally speaking, the German sectoral unions welcome digitalisation, and, even in a sensitive area such as nursing, their view is that the new forms of digital assistance and automation systems offer great potential for easing the burden of work. Digital tools and technologies could make hard work easier and so reduce the workload. But they could also increase stress. Work intensification and the removal of the old work/life boundaries are considered a new phenomenon, related to digital work. From the trade unions' point of view, the risks are 'simplification, de-qualification and a devaluation of human work'. In a union's slogan: *Employees should not have to function more and more like machines themselves.*

Digitalisation as such may not be always explicitly mentioned in the texts of the collective agreements. But it is mostly referred to indirectly, when the agreements focus, in new terms, on issues such as work intensity, working time, the work schedule, training measures, teleworking, data protection, transparency via digital tools, and the work / life balance.

Trade unions generally criticize the employers for the lack of any discernible overall strategy for the development of the digital hospital. One reason for this could be the still low levels of digitalisation in the whole hospital system. This is probably why, compared to other sectors, there has still been little research and few empirical surveys carried out in Germany about digitalisation in the hospital sector. Hospital operators, health insurers, IT providers – all the players – have different ideas as to what 'digital health' should look like. Some question, for instance, whether it will always provide the best possible care for patients, which is precisely what should be the focus in the public discourse. For that reason, emphasis is placed on the need for legal requirements and compliance with ethical standards. The key concept is, indeed, that health must not become a commodity.

The state is, and will be still, an important actor in the digitalisation of hospitals. In a recent initiative, for example, with a broad investment programme, the Federal Ministry for Health approved a 3 billion euros support programme from January 2021, in order to enable hospitals to invest in modern emergency capacities, digitalisation and IT security. The federal states will provide a further 1.3

billion euros in investment funding. Funding is provided for investments in modern emergency capacities and improved digital infrastructure, e.g. patient portals, electronic documentation of care and treatment services, digital medication management, IT security measures, and cross-sector telemedicine network structures.

4.3 The cases in Southern Europe

In France, collective bargaining in public hospitals is linked to the regulatory framework of other public sectors, such as the state and local authorities, which follow a common general framework for collective bargaining. The situation differs for the private hospital sector, which follows the collective bargaining rules applicable to the private sector. Negotiation on digitalisation issues is centralised, with the exception of some discussions in the High Council for Public Service in the Hospital Sector, but there are a whole range of decentralised practices in individual establishments, regarding, for example, the choice of software and licenses. Decisions always come from hospital directors and heads of department. In most cases, they are imposed unilaterally, so that digitalisation has not been so far a topic discussed with the trade unions, although they have asked for it to be included.

The French report contains many interesting quotes from the interviews conducted with a number of sectoral trade unionists. Some recognize the inadequacy of their digital skills or their different order of priorities, making it difficult to negotiate about this issue at the collective bargaining tables. Most believe that productivity gains, because of the use of new digital technologies, should bring concrete advantages for workers. This could be, for example, reduced working hours, increased possibilities for teleworking, more investment in the training of workers. Critical comments and remarks are not infrequent. Some complain of the risk of disruption of traditional trade union structures and practices, for example, by encouraging the creation of autonomous professional groups. Others fear the end of the unions' mediation role, as workers look for channels other than trade unions to acquire information and organise forms of collective action. This seems particularly true among younger workers, who are more inclined to use the internet than to refer to their union representatives at the workplace.

In Spain, the regional governments are mostly responsible for healthcare, while other powers lie with the State exclusively. A process of decentralisation has been going on since the 1980-90s, with the transfer of powers from the State to the regional governments. For each health service, there is a sectoral negotiating table, attended by representatives of the corresponding public administration or health service and the most representative trade union organisations in the country and the region. To participate in the negotiations, they must have obtained 10% or more of the votes in the elections for delegates and staff boards in the health service. Negotiating tables exist at the regional level (regions and cities). Agreements deal with matters falling under the competence of the governing body of the public administration. Many matters tend to be dealt with in collective

bargaining. In the health sector there is a 'Framework Forum for Social Dialogue', where the most representative trade union organisations are represented and discuss with their counterparts' labour-related issues of importance in the National Health System. This Forum is constantly informed of the situation regarding the roundtables and agreements in the sector.

Digitalisation is still not a subject dealt with, as such, in the hospital collective agreements, with the important exception of teleworking, which has received much attention from the negotiating parties. Teleworking is not accessed by the majority of employees, as its practical implementation is based on the conditions determined by the centres, departments or units, which ultimately define the individual agreements on this matter. The incorporation of new technological tools is not an issue discussed in the sectoral negotiating tables. The purchase and introduction to hospitals of new technology are often centralised, at least at the regional level; trade unions are calling for account to be taken of the differing needs of the hospitals, their size, specialisations and services. The lack of training is one of the main shortcomings in the implementation of technological changes. Trade unions seem to be often excluded from the training committees set up in hospitals, or merely informed. Since the pandemic, other issues (wages, employment, training, etc.) have regained importance and require a new momentum in collective bargaining. The place of digitalisation on the trade union agenda depends on the context in which trade union action takes place. Workers are calling for recruitment and training in order to be able to adapt to change.

Trade unions are focusing on the following issues, impacted by digitalisation in the whole sector: a) staff recruitment; b) coordinated equipment policies among hospitals; c) training and re-training of staff to adapt to the new digital tools; c) greater participation of workers' representatives, both in the introduction of new technologies and in the vocational training of workers. Trade union cooperation on digital tools and equipment policy in hospitals must, it is felt, be enhanced. Summing up, the incorporation of new digital technologies in hospitals is not in itself a focus of collective bargaining. Nevertheless, digitalisation cuts across many of the needs raised with regard to working conditions. Particularly striking is the need for good quality training for staff, as well as involvement of workers' representation in the management of digital change.

In Italy, collective bargaining in the hospital sector takes place at several levels. The national sectoral agreement establishes the legal and economic aspects which apply to the whole national territory, and the decentralised agreements integrate and further specify these decisions. The system is coordinated centrally, as the national level defines areas and subjects on which further decentralised bargaining can take place. Information and consultation rights play an important role between one agreement and the next. National collective bargaining, as for all sectors of the public administration, is conducted by the single national agency for the representation of public employers (ARAN) and the most representative trade unions, which, nationally, have met the selective requirements set by the law (5% at least as a weighted average between vote and members). ARAN negotiates on the

basis of the financial resources allocated in the budget law to the renewal of the national contract, and of the guidelines set by the Ministry of Public Administration. This sector was also severely affected by the freeze on collective bargaining in the whole public sector, between 2011 and 2016.

Unions are keen to influence and manage the implementation of new technologies, a task rendered more difficult by the exclusion of work organisation as a bargainable item, since the reform of bargaining in the public sector. In local contexts where there is a strong history and culture of social dialogue, this has had little impact on the ability of unions to negotiate changes impacting work organisation. With regard to digitalisation, a joint national committee on innovation and remote or agile work (Organismo Paritetico per l'Innovazione – OPI) was set up at the time of the renewal of the 2016 – 2018 agreement. It is a system in which information, consultation and negotiation interact. The national sectoral agreement provides for a similar joint commission to be set up in all units with over 300 employees. Members of the local OPIs have the right to information and consultation, to engage in dialogue around the implementation of specific changes and may propose changes or topics for future collective bargaining. Worker participation is particularly valued and encouraged in the industrial relations system of this sector. So-called 'agile work', i.e. remote work or work from home, is the issue most directly referred to in the texts of the most recent agreements; including the latest national sectoral agreement. The arrangement is a choice on the part of the worker and can be revised; also, he/she will have exactly the same individual and collective rights as workers at the workplace. Union leaders are open about the challenges posed by new technologies to the unions' agendas: 'the risk is that the complexity and specificity of the material leaves the union at a disadvantage'. As a result, unions tend to focus on the 'systemic level,' negotiating on 'organisational systems' rather than specific technologies. Regarding the role of unions and collective bargaining in digitalisation and organisational change, in the words of an interviewed trade union official: *'Collective bargaining is the real added-value, because managers and trade unionists were far-sighted. They looked to the healthcare of the future, they invested in the development of organisational models. This is how we addressed major challenges like the pandemic, organisational changes, structures, skills and capacity. The bargaining table is forward-looking'*.

4.4 The two countries of Central-Eastern Europe

The healthcare sector in Poland has trade unions affiliated to the three main national confederations: 1) NSZZ 'Solidarność', the National Healthcare Section; 2) the All-Poland Alliance of Trade Unions (OPZZ), with the largest nationwide federation covering healthcare and social assistance workers (FZZPOZiPS); 3) the Trade Unions Forum (FZZ), the second largest nationwide federation, which covers various medical professions. Yet, a number of smaller unions represent particular medical professions (nurses, anaesthetists, physiotherapists). The employers' side is very poorly represented.

Generally, issues related to employment and working conditions are regulated through legislation. Collective bargaining is completely absent in the sector. Collective bargaining, if and when conducted, takes place at company level only, which is a typical situation in Poland. According to a Eurofound study (2022), in 2018, only 2% of the sector was covered by collective agreements. The most common form of social partner involvement consists in consultations, i.e. the social partners issue opinions on draft legal acts relating to healthcare. There are two tripartite teams within the tripartite and consultative Social Dialogue Council; the first is the Tripartite Sectoral Team for Healthcare (at the Ministry of Health); the second tripartite body is the Sub-Team for Healthcare within the Problem Team for Public Services. Social partners that are considered representative at the national level are primarily involved in issuing opinions on draft legal acts, in the course of public consultations. For example, in April 2018, the Sub-Team for Healthcare discussed the implementation of the Internet Patient's Account. The positions of trade unions and employers' organisations are not binding on the government: they may be taken into consideration but are not always. In general, the government decides, quite unilaterally, which views of the social partners will be taken into account. It also seems that in the last two years, the consultation agenda within the aforementioned tripartite bodies has been dominated by current events such as the Covid-19 pandemic or the recent influx of refugees from Ukraine.

The implementation of digital changes – while not specifically related to these criticisms – has not been a real priority for the social partners. Other issues, such as the remuneration of middle-level medical personnel, seem to be a more important topic of discussion. Digitalisation in the healthcare sector, including the introduction of e-health tools, has sometimes been discussed among social partners in recent years. In the meantime, legal changes have been introduced through parliamentary initiative (i.e. via a member of the 'Sejm', the lower Chamber of Parliament), which, unlike government bills, allows the government to skip the public consultation stage.

Due to the lack of collective bargaining practice, only broader attitudes of trade union representatives towards digitalisation can be discussed. These attitudes, in a nutshell, range from moderate interest to disinterest. The attitude of the nurses' trade union seems quite different, because of severe shortcomings in the process for introducing digital tools. Nurses have been experiencing problems resulting from an excessive workload due to labour shortages for years. They have no voice in consultations on these tools either at sectoral or at hospital level, which makes the implementation process less smooth than it could if their opinions were taken into account. The only form of interaction related to the digitalisation process, were some conferences organised by the Ministry of Health, but these were only intended to inform employees about the new tools: the role of the nurses participating in them was completely passive.

Within the current institutional framework in Poland, it is very unlikely that digitalisation will become a key topic for social dialogue, with binding outcomes for policymakers. The functioning of the

healthcare system was and is still regulated exclusively by the statutory legislation. In order to try to effectively influence the situation of the employees that they represent, trade unions must be able to focus their involvement on national tripartite social dialogue bodies. And this is often not enough to push through their demands, including those related to digitalisation, which are seen as of less importance.

In Hungary, workers in the health sector are represented by several organisations – for professional staff, nurses, and doctors – as trade unions, at this sectoral level too, are quite fragmented. Other actors involved are the Hungarian Medical Chamber and the Hungarian Chamber of Health Care Professionals.

With the 2020 Health Care Service Act, collective bargaining in public health institutions has been banned, and social dialogue reduced to a minimum, leaving the employers alone to negotiate at their discretion. Trade unions representing health workers have formed an action group against the above-mentioned law, which significantly undermines the interests of workers, and have appealed to the International Labour Organisation (ILO) to have the law repealed. In December 2021, the ILO confirmed that the 2020 law does not comply with the international conventions signed and promulgated by Hungary, but the law remains unchanged.

There are no regular national or local forums for health employers to discuss strategic issues such as digitalisation. When a new system is introduced, such as digital equipment, short, mostly online, training sessions are organised to prepare employees, e.g., teaching them how to operate ventilators, how to evaluate data. As social dialogue in the health workplace is almost non-existent, there is no consultation on digitalisation in the workplace.

Currently, trade unions are not involved before the event in the digitalisation process in hospitals. Ex-post criticism leads, at best, to corrective action. The introduction of digital technologies does not in itself provoke resistance, but lack of preparation and excessive administration make adaptation difficult. The digital strategy should be developed with the participation of employee representatives and representative employee organisations, not least to validate the employee experiences identified in this research and to identify hidden risks and potential failures associated with digital aspirations. To further improve processes, and maximise the benefits of digitalisation, it is also necessary to involve worker representatives in the development of recommendations on how to address the identified risks.

SECTION 5. OVERALL SECTORAL CROSS-CUTTING CONCLUSIONS

5.1 The two Nordic Countries

In Finland, digitalisation is already set to change the methods and contents of employment in all sectors. There is virtually no sector that will not be impacted by digitalisation. As discussed above, the three sectors studied in this report apply digital tools differently and for different purposes. Consequently, attitudes to digitalisation vary significantly between the sectors. Although all sectors of economic activity are impacted by digitalisation and will be much more so in the future than now, collective agreements are silent on this issue. The reason is not that the social partners involved in the bargaining processes are unaware of the huge importance of digitalisation. Rather, there seems to be tacit mutual trust that digitalisation, its positive and negative sides, can be properly handled in dialogue between the social partners.

In Denmark, the level of consensus in the national industrial relations system is high, both in the private and the public sector, and so there is trust that digitalisation and its general effects will be handled in a positive way. Certain negative aspects are not underestimated and need to be properly managed. Today, only very few aspects of digitalisation are addressed directly in the multi-employer collective bargaining. Policy and general implications, with their possible developments, are discussed among the social partners at national level, in several joint and cooperative structures, both bi- and tripartite. Most elements of digitalisation are handled in local negotiations, if and when the social partners feel this could be important. For instance, unions and shop stewards can bring up issues they feel are important for discussion with the local management and the cooperation committees in the public sector.

5.2 The Continental model: the German case

In Germany, the digital transformation has had different histories, paths, speeds and dissemination processes in the three sectors analysed in the national report. Correspondingly, the strategies of the social partners and trade unions differ to some extent, although they also have much in common. Trade unions stress the 'common good' character of the public services, which cannot be left purely to market forces. They also emphasise the impact on working conditions, and therefore insist that digitalisation must not be implemented at the expense of employees. The influence of political decisions in these three sectors is very visible in the market structures, especially in the energy and in the hospital sectors, which have been facing challenges due to the privatisation and liberalisation processes which have been ongoing for years. In general, digital transformation occurs as a consequence of top-down strategies, and there still seems to be no integrated comprehensive strategy.

Trade unions are less successful in achieving national agreements to alleviate the impacts of digitalisation. Most of the agreements are concluded at company level, where the works councils

have strong legal rights and powers. Trade unions support them in this process, providing assistance and advice as well as organising certain training programmes, or national campaigns. Trade unions acknowledge the potential positive effects of digitalisation. They stress, however, that quality of services and working conditions of employees should not be affected negatively. Both targets should be reconciled and supported. Trade unions participate in the general discussion regarding new technologies and digital solutions – such as artificial intelligence, platform work or blockchain – through workshops, policy papers and thematic conferences. They also emphasise the importance of assessing the impacts of such new developments from the perspective of employees.

5.3 The cases in Southern Europe

In France, the three sectors analyzed share many elements and decades of a common history, although diverging in some aspects in the most recent period. This also applies to industrial relations. Until the mid-2000s, in fact, the electricity sector too belonged to the public sector and, as such, was under the specific collective bargaining framework of the public administration, which was at the time very limited in scope. In recent decades, electricity production and supply have been privatised and liberalised, and the scope of collective bargaining has been expanded in the sector.

The trade unions have various demands, and engage in intense negotiations on many topics: pensions, salaries, workforce and skills planning, *etc.* In the public administration and in the (public) hospital sectors, the scope of collective bargaining was very limited until quite recently. Starting from 2019/2021, some important developments occurred in the regulation of the social dialogue and concerning the effects of collective agreements, including when, in the public administration, they become binding. For now, digitalisation is a relatively minor topic for collective bargaining. In the electricity sector, the two main companies (EDF, production; ENEDIS, distribution), have concluded very few agreements related to this topic. The only exceptions are on teleworking, monitoring the effects of teleworking and digitalisation, and the right to disconnect. Neither it is a recurrent topic of the social dialogue in (public) hospitals and the public administration. The only national (framework) agreement concluded on the topic is the 2021 agreement on teleworking. Digitalisation is having many effects on the quality of work, reflected by the demands of trade unions on these issues: thus, the agreements call for an intensification of social dialogue and collective bargaining on the topic of the digital transformation in the sectors.

In Spain, the digital transformation is taking place with little social partner involvement; this is only *ex post*, in order to address changes in work organisation and working conditions. Regarding the content, collective bargaining deals with the regulation of specific matters that are modified by digitalisation. There are no 'digitalisation agreements' as such. Social partners instead negotiate on specific aspects of the reality of work. In this respect, the main issues addressed relate to teleworking (public administration, hospitals, electricity), training (public administration, hospitals, electricity), time management and flexibility (electricity). Trade unions stress the importance of addressing the

changes brought about by digitalisation in a comprehensive and proactive manner. They are critical of the conditions in which digital change is taking place – mainly lack of staff and insufficient training for workers – as well as the lack of participation in the process. This way of proceeding contrasts with the way in which the Covid-19 pandemic was tackled, when social dialogue had major results, concluding important agreements on various issues.

In Spain, the government and stakeholders are making progress in the social dialogue on digitalisation processes, with the aim of ensuring improved working conditions and higher quality public services. The 'Framework Agreement for a 21st Century Administration' recognises the importance of providing digital services with guaranteed access for citizens, the creation of training itineraries enabling public administration staff to acquire new skills, knowledge and abilities in digital matters, the creation of new public employment opportunities in line with needs and the promotion of collective bargaining at negotiating tables.

These recommendations serve as a framework for designing specific tools to address digital transformation from a comprehensive collective bargaining perspective. In line with the recommendations of the social partners (AMETIC ⁽¹⁹⁾, CCOO & UGT, 2018, 2019), it is advisable to move forward with the creation of specific and clear procedures to ensure the proper implementation of digital transformation in the workplace.

In Italy, the changes being wrought by digitalisation are both profound and sweeping. In this situation, the non-neutrality of technology opens up possibilities for both increased conflict in industrial relations, as well as increasing collaboration. The social partners are attempting to manage the impacts of ongoing changes through collective bargaining, joint examination and information and consultation. Digital transformation appears poised to test the ability of the current system of industrial relations to continue to effectively govern those changes in ways that achieve benefits for workers, users and the organisation. Italy has a rich history of using industrial relations and collective bargaining to jointly negotiate changes and monitor their implementation by social partners. Specifically, regarding digitalisation, CGIL, Italy's largest labour confederation, has acknowledged the need to 'negotiate the algorithm' (2018), implying that unions must develop deeper expertise in the specific types of digital technologies affecting work. We see this approach reflected in the case studies as well: for example, the inclusion of a right to remote and smart work in the new public administration agreements, the creation of bi-lateral commissions for addressing and monitoring changes that impact work organisation, the negotiation of the '*Statute of the Person*' in Enel and in the national industry-wide agreement, both signed in 2022. However, as in other EU countries, there is much less experience of joint implementation, at the level of the workplace, through direct worker

19. AMETIC, CCOO & UGT (2018), *Recommendations on the Impact of Technology in Productive Work Centers*. April. AMETIC is the national association which represents the digital technology industry in Spain.

participation in specific changes. While unions are understandably concerned about the reduction of their intermediation role, as a consequence of the new HRM direct participation schemes, there is also a risk associated with not promoting such an approach. As digital technologies impact work more and more, unions may be seen as unable to co-manage the implementation of these technologies for the benefit of workers and users. By experimenting with new ways of joint problem-solving and decision making, and continuous, direct participation in the workplace, leaders can tackle the adaptive challenge presented by digital transformation, to the benefit of workers, organisations and citizens, while strengthening the role and ability of unions to collectively represent the interests of workers.

5.4 The two Central-Eastern Countries

In Poland, in all the three sectors analysed, the impact of digitalisation on employment conditions is generally not a subject for collective bargaining. This can be traced back to the general weakness of this form of industrial relations in the country. Also, where collective agreements exist, in some industries such as the electricity sector, they are mostly limited to basic or 'traditional' issues related to employment conditions. The most typical form of social dialogue in Poland is consultation in tripartite bodies, the most important of which is the Social Dialogue Council. By participating in these, the social partners try to influence legislation, submitting opinions on draft legal acts through their bilateral relations with ministries. This is virtually the only mechanism which exists for regulating public policies in every sector. Thus, Poland can be considered to have a state-driven social dialogue system: the government generally initiates certain changes – also in the field of digitalisation of public services – and the unions play a reactive role, adapting to the current direction of government activity. The drawback of such a system is that the employees' representatives remain always a step behind the decision-makers, and their influence on the shape of the changes made is quite limited. This is especially true in the case of the digital transition. Although some social partners seem to be still ignoring this ongoing process, middle-level staff may experience the negative effects of new solutions, without the workers' voice being duly taken into consideration thorough adequate and timely consultation mechanisms.

In Hungary, digitalisation – with the new skills and knowledge it brings – is widely seen as having a positive impact on career prospects and job security. Today, in fact, the levels of digitalisation vary significantly between the different areas of the public administration. As in the Nordic countries, in Hungary the opinion prevails that technological innovation must be understood and welcomed as an opportunity that can be best exploited if the workforce is prepared to the highest possible standards. It is expected to reduce the potential for human error, and thus save the extra time and cost involved in repair. Work can become easier and faster in many jobs. Increasingly, physical workers too are now equipped with smartphones and laptops, improving their digital literacy and helping them to adapt. Yet, digitalisation offers the opportunity to connect disparate work units and organisations, to bring together scattered information and to fully exploit the potential of information. It can also

increase job security and reduce stress at the workplace, if the right preconditions are in place, in particular prior information, consultation and training and preparation. In addition, the fact that artificial intelligence can take the burden of repetitive, monotonous tasks from workers' shoulders can also lead to a reduction in workplace stress.

At the same time, one negative and frustrating consequence is that a worker's every move can be constantly monitored and controlled by the management. Labour inspection and control have been progressively dismantled by the Hungarian government, and knowledge of the rules does not seem to be sufficiently in depth according to the interviews, although OSH training is mandatory in all workplaces. The legal requirement for no more than 6 hours of working time in front of a screen and 10 minutes break per hour is not observed or enforced, according to the interviewees. However, these factors also reflect age specificities: young people are generally considered to be more open to developing and learning new technologies, and young people may also have an advantage in team integration due to generational differences (if the majority of the team is young). It is therefore particularly important that employers invest significant tangible and intangible resources in the development and training of older employees.

Last but not least, digitalisation has facilitated trade unions' activities, mainly in the area of organising and activating their members; they publish online newsletters, run websites, use social media, meet via videoconferencing, saving a lot of travel time and meeting in larger numbers with organised online voting during the Covid-19 pandemic. They have easier and quicker access to information on legislation and to amendments to legislation that can be used in advocacy, they can store materials more easily. The use of digital tools is speeding up the opinion process, involving more people in consultations on legislation.

SECTION 6. RECOMMENDATIONS TO NATIONAL AND EU STAKEHOLDERS

Since the situation varies so widely between macro-regional areas and individual Member States, and between the various sectors investigated, what policy indications can we propose? The DIGIQU@LPUB study required a final specific focus on recommendations addressed by the trade unionists interviewed to the national and EU stakeholders. Here again, given the different starting points and wide range of needs, a few common denominators can be identified, after taking account of the national political and institutional differences.

One general and quite common assumption across countries and sectors is that the process of digital transformation must be approached in a pre-emptive and participatory manner, so that both the management and the workers' representatives can take the reins of the process of change, in all phases of development (from design to evaluation). This requires certain fundamental priorities to be achieved, such as:

- the strengthening of information and consultation rights;
- enhanced social dialogue and collective bargaining;
- assessment of the public-private relationship;
- data protection.

Some country reports call for the typical individual and collective rights of standard employees to be extended to the new digital workers in precarious employment situations.

While these trade union demands are more or less strongly present in all national reports, the overall context in which they are framed differs. It is therefore important to present the policy recommendations made by the different trade unions in the final synthesis drawn up by the editors of the eight national reports.

6.1 Recommendations to the national stakeholders

A central idea of Nordic culture and society is that the voices of all people must be democratically heard, and that all persons must be allowed to gain the skills to take part in the life of their communities. In present-day society, digital literacy can be an essential precondition for better and broader societal participation, developing strong capacities to allow people to take part actively in the current epochal changes, also in their working life. Finland as a country seems well prepared for the radical changes taking place today. There is a general view that digitalisation and artificial intelligence are, above all, means of improving people's lives. In this regard, Finland has already carried out some experiments relating to a form of basic income – an original prospect and experiment, which could even be extended, but would not, by itself, be enough. Perhaps the biggest digitalisation-related challenge in Finland is the social and health care reform (Sote). At present, it seems that the various welfare counties are developing their own digital platforms to collect and

store the massive amounts of data involved and to enable smooth utilisation of the records needed by health care services. Regarding the recommendations to Finnish national stakeholders, the main goals must be to look for and find models that allow citizens to participate and contribute to society in a context in which the overall amount and importance of paid work could be destined to decrease. New digital technologies (for example, digital interpretation services, remote work, mobile work, and other digital employment arrangements) should be used to promote the inclusion of disadvantaged persons in the labour force ⁽²⁰⁾. There is a need for training on the use of systems and on data management, as well as on compliance with confidentiality rules. The EU's general data protection regulation also creates new needs for training.

In Denmark, three general points are mostly taken into consideration by policy makers. The first is that for digitalisation to achieve its full potential, correct management and implementation is vital. Secondly, for digitalisation processes to be effective and successful, it is equally crucial to involve all the relevant actors (workers, end users, citizens and managers). Third and last, the whole workforce needs, and must be properly supplied with, ongoing training and skills development. These are general ideas and approaches, quite common in the Nordic model of economic and industrial democracy. The Danish stakeholders recommend allocating the necessary time and administrative resources to fully implement digital changes; to design for worker involvement in the development, selection and implementation of new technologies, which can improve efficiency; to adapt technology and digital tools to the final users; to emphasise policies and initiatives that provide solutions across systems, professions and localities in order to improve cross-sectional coordination and communication, which is often problematic; to prioritise skills upgrading both specifically geared to the task or profession as well as more general upgrading of digital skills for all workers; to improve decision-makers' understanding of the impact of technology at multiple levels for everyday practitioners, in order to successfully implement digital tools, for instance, through onsite visits, joint meetings and workshops.

In the case of Germany, the recommendations to national stakeholders seem to focus mainly on a number of aspects concerning the organisation of digitalised work. The list of issues includes work intensification, psycho-physical wellbeing, data protection and transparency issues, understaffing, the shortage of skilled workers, which is considered by trade unions and works councils as the most important topic as things stand. Cyber security and data protection will remain major issues in the course of the digital transformation. In terms of policy and recommendations, the general aim and expected outcomes should be to inform employees and their representative bodies of the adoption of new digital measures. This should be done at all stages of the process, from the very beginning,

20. One specific group which tends to lack linguistic and digital skills are immigrants in general, and refugees in particular. Immigrants' employment rates tend to be 20 percentage points lower than among the native population in Finland. The same applies to people with disabilities, with employment rates in this group likely to be even further below that of the general population.

and with the necessary training programmes. New demands are being placed on lifelong learning and continuing education. The participation of employees in the digital transformation should be strengthened. The public sector should keep and develop its own IT-skills and not rely solely on external consultants or IT-service providers. The success of the digital pact with the Interior Ministry should be extended to the Federal States and local governments in the public administration, as well as to other public services.

In the case of France, a list of recommendations are made to national stakeholders, among which stands out – in essence – the objective of preventing top-down approaches, disconnected from the specific realities at work, instead considering the point of view of those who work there and use the services. This requires better inclusion of populations and citizens who today still have no access to digitalised public services because of their inadequate basic digital skills. There are particularly urgent needs in the central and local public administration, and in the health and hospital sector. Digital software must be harmonised between the various administrations and within each of them. At the workplace, it is also essential to invest in digital literacy and training of workers.

They must be made aware of the impact of new technologies on employment, before implementation. All outsourcing and privatisation should be monitored, following the recommendations contained in a recent EPSU report ⁽²¹⁾. Productivity gains due to digitalisation must be used to reduce and redistribute workloads, enhancing the quality of life of workers and service users together, without reducing employment. A secure IT pole should be established, at national or sectoral level, to benefit all operators. New occupational diseases related to digitalisation must be included in the list of recognised occupational diseases. All this requires a strengthening of social dialogue and collective bargaining, beginning with information and consultation rights, including on issues relating to technology. Debates should be timely, constant and more incisive, not merely formal social dialogue. Collective bargaining must go beyond considering the current scope of teleworking and the right to disconnect. It must tackle the social return on the benefits produced by the digitalisation of work and services, in terms of productivity and quality, to improve the well-being of individual workers and of society as a whole.

The Spanish report sums up and pinpoints the lines of action referred to also in other country reports. The list of points concerns:

- *Job stability*: public services must have the necessary staff to provide these services.
- *Quality of employment*; the effects of digitalisation on employment need to be analysed not only from a sectoral perspective, but also from an occupational perspective, given the uneven

21. <https://www.epsu.org/article/outsourcing-hollowing-out-public-administrations-new-epsu-report>

impact of digitalisation on different professional categories. Gaps also need to be addressed so that they do not turn into discrimination (by age, occupation, etc.).

- *Work organisation*: it is necessary to address the intensified pace of work and its impact on workers' health. Possibilities for reducing working time could be explored, as well as how to strike a good balance between work, personal and family life;
- *Training and qualification of workers*: it is very important to address the challenges posed by digitalisation in this regard. The analysis carried out has highlighted the shortcomings of existing training in the new digitalised work processes. There must therefore be guaranteed training and retraining, during working hours, and the trainee must be replaced in the workplace so that the training will actually take place.
- *Pilot projects* should be proposed to evaluate the impact of technological implementation on workplaces and specific jobs.
- *Bipartite monitoring committees* should be set up, with regular meetings, able to adopt recommendations based on experience and problems that may arise during implementation, to ensure early resolution.
- *Information and consultation* are key for the process to work, so it is essential that communication mechanisms are established, both with the workforce and with trade union representatives, to address workers' concerns or transmit information on data protection.
- *Training and/or retraining*: it is also vital to establish mechanisms and to determine the new job profile needs that may be appropriate in view of the incorporation of new technologies.

The policy recommendations made in the Italian report include expert comments on the legal and regulatory framework: joint implementation and monitoring of changes in workplace training. The social partners should actively monitor the impacts of new technologies and apply viable enforcement mechanisms when the impacts stray from the agreed-upon intents; new technologies, and their implementation, should respect the rights of workers as outlined in the Workers' Statute. During negotiations, unions should have access to subject-matter experts so that they can effectively represent workers' interests based on an independent view of technologies. Joint bodies should be supported by subject-matter experts viewed by social partners as legitimately independent, to help them make informed decisions. Initiatives such as the CGIL action '*Labour 4.0*' and the *Forum on the Digital Transition* are important steps in this regard. Union delegates and managers should also receive training in new forms of technology-enabled work organisation, including best practices for implementing remote and agile work arrangements. Industrial relations should encourage direct worker participation in the selection and implementation of new technologies, especially when employment, job quality and work organisation are likely to be impacted.

The policy recommendations regarding the two countries of Central Eastern Europe, Poland and Hungary, reflect the very serious associative weaknesses of the social partners, and of the social dialogue as a whole. The sectoral level of collective bargaining is almost absent and consultation mechanisms are deemed essentially ineffective. In the few and restricted areas where trade unions still seem able to play a significant role, the digital transition occupies a completely residual position on the agenda. In Poland, basic employment conditions and wage levels are the main concern of the workers and of their union representatives. In such a scenario, the workers want to have a say in designing the socio-technical systems they use in their work, as they know best how these systems could be designed to enable them to work more productively and comfortably. At the moment, in Poland, the only issue on which there seems to have been some progress is the right to disconnect.

Workers appear particularly aware of this issue and are urging their unions to make more vigorous efforts to introduce more appropriate legislative solutions to create a general, effective right.

The issue of bottom-up involvement – preventive, effective, at all levels – is also at the heart of the final recommendations contained in the Hungarian report, relating to the development of a digitalisation strategy in each workplace. This objective requires - for a country like Hungary - a joint effort by all the major stakeholders, in their respective spheres of power and responsibility. Significant financial resources are needed, which the state will have to find in its budget, also taking advantage of the dedicated EU funds available. The Hungarian trade unions expect the government of the public administrations to restore the trade union rights that are currently denied, to meet them to consult and negotiate with them, and to activate the institutions of national and sectoral social dialogue. One of the issues of most concern is the protection of workers' mental and psychological health, which is currently not adequately considered in legislation and not even investigated during labour inspections.

Another issue is the situation of older workers, particularly exposed to the risk of obsolescence of skills and reduction of professional worth, in the face of the rapid technological change at work. Particular attention will have to be paid to updating and upgrading their competences, promoting inter-generational cooperation, since this situation can create friction in everyday life, and requires growing awareness among all stakeholders. Last but not least, all the stakeholders must remain vigilant on the issue of cyber security. For public services, the protection of digital systems and data is essential for both providers and users. This protection must also include the issue of surveillance and potential monitoring of workers through digital technologies.

6.2 Recommendations to EU stakeholders

Trade unions in all countries are increasingly aware of the value of transnational cooperation in tackling ongoing processes and transformations, including the digital transition. Today, international organisations and institutions play an unprecedented role in the transformation of employment and

social systems in each country, and especially in a macro-regional context such as the European Union. At the same time, employees' representative actors and structures are also emerging at transnational level to facilitate cross-border cooperation and solidarity (for example, the role of international trade union confederations and federations such as EPSU, in this project and study; the sectoral social dialogue fora; the European Work Councils; the Transnational Company Agreements; the regional cross-border or bilateral boards or alliances). Since the ongoing challenges are increasingly global, trade unions' ability to address them must also be global.

Most of the country reports highlight that the European social dialogue plays a very important role in supporting the social dialogue in the different countries, generating and promoting negotiations between the social partners on matters related to digitalisation, in the different areas and at the various recognised levels. At the European level, stakeholders have an important role to play in supporting the ability of national social partners to jointly manage the impacts of digitalisation. Throughout the EU, those with higher human capital tend to participate more in continuous education than those with lower human capital.

The Italian report suggests that EU stakeholders should advocate the development of appropriate legal and regulatory frameworks in the Member States, provide funding for training and awareness building around technology-driven change, and should promote cross-border collaboration and learning through the creation of communities of practice. EU stakeholders should advocate for ongoing research into digitalisation and its impact on work and society, so that stakeholders' understanding and ability to jointly govern changes can keep pace with the changes themselves.

In accordance with the 2020 Framework agreement concluded by the social partners at EU level, it is very important to continue generating collective bargaining frameworks in the various areas related to the implementation of new technologies in the workplace: teleworking, health and safety at work, training, data protection, user access, sub-contracting, 'agile' or 'smart' working methods.

The task for European-level policymakers and national labour market partners is to find effective policies to also include those with low digital skills in life-long learning. One of the most detailed contributions, for a better regulation at the EU level, is the Danish one. It suggests:

- to prioritise the upgrading of skills, both those aimed at specific tasks or professions and more general upgrading of digital skills for all workers.
- to set clear priorities on where digitalisation can be most successful and efficient, and prioritise thorough and high-quality implementation in these policy areas and of these technologies, rather than broad implementation of various technologies across multiple areas.

- to prioritise training in digital management, in order to ensure better implementation of digital technology.
- to create a framework for policies on the monitoring of workers and labour processes that ensure decent and humane monitoring of work, rather than excessive monitoring that results in unhealthy work and poor working conditions.
- to identify further the potential problems associated with digitalisation, in terms of job quality and occupational health and safety, and to address these actively in policies.

At the EU level, the Hungarian report highlights three key recommendations:

- adequate dedicated resources should be made available, so that Member States can make the costly investments needed to modernise work and services through digital technologies.
- cross-country cooperation is needed, to enable improvements to be made by the sharing of developments, good practices and joint projects.
- training and digital courses should be harmonised, online, at a European level, or through exchanges of experience and study visits, based on the model of the Erasmus project.

A last remark, coming from the German report, pinpoints that in some countries, such as Germany, dependence on the US (Silicon Valley corporations) and China, with an authoritarian approach to digitalisation, is currently rated high. The experts therefore recommend that national and EU policy-makers develop their own digital strategy and define a proper European path to digitalisation.

REFERENCES

- Alsos K., Nergaard K. and Van Den Heuvel A. (2019) Collective bargaining as a tool to ensure a living wage. Experiences from the Nordic countries, ETUI, Transfer 25 (3).
- Alsos K. and Dølvik J.E. (eds.) (2021) The Future of Work in the Nordic Countries: Opportunities and Challenges for the Nordic Working Life Models, Copenhagen: The Nordic Council of Ministers.
- Andersen K., Ibsen C.L., Alsos K., Nergaard K. and Sauramo P. (2015) Changes in wage policy and collective bargaining in the Nordic countries – a comparison of Denmark, Finland, Norway and Sweden, in Van Gyes G. and Schulten T. (eds.) Wage bargaining under the new European Economic Governance, ETUI.
- Bernaciak M. and Kahancova M. (eds.) (2017) Innovative union practices in Central-Eastern Europe, Brussels, ETUI.
- Bordogna L. and Pedersini R. (2015) What kind of Europeanisation? How EMU is changing national industrial relations, *Giornale di Diritto del Lavoro e delle Relazioni Industriali*, vol. 146.
- CISL (2022) La Cisl lancia l'allarme sul digital divide nella terza età: 8 anziani su 10 esclusi dai servizi digitali, <https://www.cisl.it/notizie/dai-territori/dai-territori-basilicata/basilicata-la-cisl-lancia-lallarme-sul-digital-divide-nella-terza-eta-8-anziani-su-10-esclusi-dai-servizi-digitali/>
- CCOO (2020) Guía Negociación Colectiva y Digitalización, <https://www.ccoo.es/af6e35ab004a61334480e3b2bcae0e93000001.pdf>
- CFDT, CFTC and UNSA (2020) Télétravail : Préconisation en vue de la reprise d'activité et perspectives à venir, Mai.
- Conchon A. (2011) Board-level employee representation rights in Europe, Brussels, ETUI.
- Czarczasty J. (2020) Articulation of the Trade Unions' Strategies on the upward convergence of social standards in the enlarged European Union – the voice of CEE countries, ARTUS Project, Comparative report, Institute for Public Affairs, Warsaw.
- Czarczasty J. and Mrozowicki A. (2023) Poland: Trade unions developing after a decline, in Waddington J., Muller T. and Vandaele K. (eds.) Trade Unions in the European Union, Peter Lang.
- Crouch C. (1994) Industrial Relations and European State Traditions, Oxford University Press.
- Crouch C. (1998) Non amato ma inevitabile il ritorno al neocorporativismo, *Giornale di Diritto del lavoro e delle relazioni industriali*, n. 77.
- Crouch C. and Traxler F. (eds.) (1995) Organized industrial relations. What future?, Aldershot, Avebury.
- Cruces J., Alvarez I., Leonardi S. and Trillo F. (2015) Impact of the euro crisis on wages and collective bargaining in southern Europe – a comparison of Italy, Portugal and Spain, in Schulten T. and Van Gyes G. (eds.) Wage bargaining under the new European Economic Governance Alternative strategies for inclusive growth, Brussels, ETUI.
- De Sario B., Di Nunzio D. and Leonardi S. (2021) Azione sindacale e contrattazione collettiva per la tutela della salute nei luoghi di lavoro nella prima fase del Covid, *Rivista Giuridica del Lavoro*, n. 1.
- DIGIT@UIL (2017) Contrattazione 4.0: innovazione e tecnologia per negoziare in tutte le imprese, Roma.
- Dribbusch H. and Bilke P. (2019) Trade Unions in Germany, Challenges in a Time of Transition. Friedrich-Ebert-Stiftung, <https://library.fes.de/pdf-files/id/ipa/15399.pdf>
- Ebbinghaus B. and Visser J. (1999) When institutions matter: Union growth and decline in Western Europe, 1950–1995, *European Sociological Review*, academic.oup.com.
- Ebbinghaus et al. (2011) Social capital, 'Ghent' and workplace contexts matter: comparing union membership in Europe, *European Journal of Industrial Relations*, no. 17.
- Esping-Andresen G. (1990) The Three Worlds of Welfare Capitalism, Princeton University Press.
- Eurofound (2016) Mapping key dimensions of industrial relations, Luxembourg.
- Eurofound (2017) Mapping varieties of industrial relations: Eurofound's analytical framework applied, Luxembourg.

- Eurofound (2018) Measuring varieties of industrial relations in Europe: A quantitative analysis, Luxembourg.
- Fleury N., Rémond A. and Rustique A. (2022) Covid-19 et Télétravail: un nouveau modèle, *La Lettre Défricheurs du Social*, n° 38.
- Flögel F. and Beckamp M. (2020) Digitalisation and (De)Centralisation in Germany - a Comparative Study of Retail Banking and the Energy Sector, IAT 20/04.
- Gallego Moya F. (2022) La negociación colectiva española ante el reto del teletrabajo, *Revista De Derecho*, 22(1), <https://doi.org/10.26441/RD22.1-2021-DE2>
- Gramolati A and Sateriale G. (eds.) (2019) *Contrattare l'innovazione digitale*, Ediesse.
- Grote J. and Schmitter P. (1997) The corporatist Sisyphus: past, present and future, EUI Working Paper SPS No. 97/4, Florence, European University Institute.
- Grote J. and Schmitter P. (1999) The Renaissance of National Corporatism: unintended side-effect of European Economic and Monetary Union or calculated response to the absence of European Social Policy?, *Transfer: European Review of Labour and Research*, 5 (1-2).
- Gumbrell-McCormick R. and Hyman R. (2013) Trade Unions in Western Europe. *Hard Times, Hard Choices*, Oxford University Press.
- Hall P. and Soskice D. (2001) *Varieties of Capitalism: The Institutional Foundations of Comparative Advantage*, Oxford, Oxford University Press.
- Høgedah L., Nergaard K. and Alsos K. (2022) Trade Unions in the Nordic Labor Market Models – Signs of Erosion? Introduction to the Special Issue, *Nordic journal of working life studies* Volume 12 (58).
- IAB (2022) Development of Collective Agreement Coverage, Statement of the IAB on the public hearing in the Committee for Labour and Social Affairs of the German Bundestag on 7 June 2021, <https://iab.de/en/publications/publication/?id=11600154>
- ICTWSS (2015) Institutional characteristics of trade unions, wage setting, state intervention and social, University of Amsterdam.
- Jäger S., Noy S. and Schoefer B. (2022) The German Model of Industrial Relations: Balancing Flexibility and Collective Action, Discussion Paper Series IZA Dp No. 15500.
- Kangas O. and Saloniemi A. (2013) Historical making, present and future challenges for the Nordic welfare state model in Finland, Oslo, Fafo.
- Keune M., Ramos Martín N. and Mailand M. (eds.) (2020) *Working under Pressure: Employment, Job Quality and Labour Relations in Europe's Public Sector since the Crisis*, Brussels, ETUI.
- Kjellberg A. (2022) *The Nordic Model of Industrial Relations. Studies in Social Policy, Industrial Relations, Working Life and Mobility*, No. 2., Lund University.
- Knudsen H., Lind J. and Refslund B. (2023) Denmark: Trade unions still afloat at ebb tide, in Waddington J., Muller T. and Vandaele K. (eds.) *Trade Unions in the European Union*, Peter Lang.
- Leonardi S. (2016) L'impatto della nuova governance europea sulla contrattazione collettiva in Italia Spagna e Portogallo, *Quaderni di Rassegna Sindacale*, n. 1.
- Leonardi S. and Gottardi D. (2019) Why no board-level employee representation in Italy? Actor preferences and political ideologies, *European Journal of Industrial Relations*, 25 (3).
- Leonardi S. and Pedersini R. (eds.) (2018) *Multi-employer bargaining under pressure. Decentralisation trends in five European countries*, Brussels, ETUI.
- Leonardi S. and Pedersini R. (2023) Trade unions in Italy: Pluralism and resilience, in Waddington J. et al., *Trade Unions in the European Union*, Peter Lang.
- Mailand M. and Larsen P.T. (2020) Danish public sector industrial relations and welfare services in times of trouble in Keune M., Ramos Martín N., and Mailand M. (eds.) *Working under Pressure: Employment, Job Quality and Labour Relations in Europe's Public Sector since the Crisis*, Brussels, ETUI, pp. 73-108.
- Marginson P. (2014) Coordinated bargaining in Europe: from incremental corrosion to frontal assault, *European Journal of Industrial Relations*, 21 (2).

- Meszmann T.T. and Szabo I.G. (2023) Hungary: After the end of the illusions, trade unions on the brink of marginality, in Waddington J., Muller T. and Vandaele K. (eds.) Trade Unions in the European Union, Peter Lang.
- Molina O. (2014) Self-regulation and the state in industrial relations in Southern Europe: Back to the future?, *European Journal of Industrial Relations*, 20 (1).
- Muller T. (2023) Minimum wage developments in 2022 - fighting the cost-of-living crisis, Policy Brief 2023.02, ETUI.
- Muller T. and Schulten T. (2023) Germany: Different worlds of trade unionism, in Waddington J. et al., Trade Unions in the European Union, Peter Lang.
- Muller T., Vandaele K. and Waddington J. (eds.) (2019) Collective bargaining in Europe: towards an endgame, Brussels, ETUI.
- Müller-Jentsch W. (2008) Industrial democracy: Historical development and current challenges, *Management Revue*, Rainer Hampp Verlag, Mering, 19 (4).
- Pesonen P. and Riihinen O. (2002) Dynamic Finland: The Political System and the Welfare State. Helsinki, Finnish Literature Society.
- Pedersini R. (2014) European industrial relations between old and new trends, *Stato e Mercato*, n. 102.
- Petersen K. and Schou J. (2020) Digitalization and the Danish Welfare State: Policies, Institutional Changes and Strategic Dilemmas, *Journal of Policy Science*, 27 (3).
- Rehfeldt U. and Vincent C. (2023) France: Fragmented unions, few members, but many voters and much social unrest, in Waddington J., Muller T. and Vandaele K. (eds.) Trade Unions in the European Union, Peter Lang.
- Rhodes M. (1996) Southern European Welfare States: Identity, Problems and Prospects for Reform, *South European Society and Politics*, 1 (3).
- Rodriguez F.C., Rojo R.I. and Lucio M.M. (2023) Spain: Boundaries, roles and changes in trade unionism, in Waddington J., Muller T. and Vandaele K. (eds.) Trade Unions in the European Union, Peter Lang.
- Rocha Sánchez F. and de la Fuente Sanz L. (2018) The Social Dialogue in the face of digitalisation in Spain. An emerging and fragmented landscape, [https://1mayo.ccoo.es/noticia:357540--El Dialogo Social ante la digitalizacion en Espana Un paisaje emergente y fragmentado](https://1mayo.ccoo.es/noticia:357540--El-Dialogo-Social-ante-la-digitalizacion-en-Espana-Un-paisaje-emergente-y-fragmentado)
- Rogers E.M. (2020) The Digital Divide; *The International Journal of Research into New Media Technologies*, 7 (4).
- Rolandsson B. and Dølvik J.E. (2021) The impact of digitalization on employment and traditional jobs, in Alsos K. and Dølvik J.E. (eds.) *The Future of Work in the Nordic Countries: Opportunities and Challenges for the Nordic Working Life Models*, Copenhagen, The Nordic Council of Ministers.
- Schmitter P. and Lehbruch G. (1979), *Trends towards corporatist intermediation*, Sage.
- Sippola M. and Bergholm T. (2023) Finland: Trade unions struggling within a Ghent system, in Waddington J. et al., Trade Unions in the European Union, Peter Lang.
- Traxler F. (1995) Farewell to the labour market organisations. Organized versus disorganized decentralisation as a map for industrial relation, in Crouch C. and Traxler F. (eds.), *Organized industrial relations. What future?*, Aldershot, Avebury.
- UGT-FICA, CCOO Industria (2022) Manifiesto 'Pacto de Estado por la Industria ¡Ya!', <https://industriamadrid.ccoo.es/89bf431db348f1a55765738bf8222e10000060.pdf>
- Van Gyes G. and Schulten T. (eds.) (2015) Wage bargaining under the new European Economic Governance, Brussels, ETUI.
- Visser J. (2009) The quality of industrial relations and the Lisbon Strategy, in European Commission, *Industrial Relations in Europe 2008*, Luxembourg.
- Waddington J., Muller T. and Vandaele K. (eds.) (2023) Trade Unions in the European Union, Peter Lang.