





Associate partners:

ETUI, Brussels

UNI Europa, Brussels

WageIndicator Foundation , Amsterdam

Solidarność, Katowice Solidarność, Gdansk CCOO Servicios, Madrid

COLBAR-EUROPE

EUROPE-wide analyses of <u>COL</u>lective <u>BARgaining agreements</u>
Supported by the European Commission - Industrial Relations and Social Dialogue Program (VP/ 2018/004/0008) | April 2019 - March 2021

REPORT: NATIONAL COLLECTIVE BARGAINING AGREEMENTS IN ITALY: AN INVESTIGATION ON WAGES AND REMOTE WORKING*

Armanda Cetrulo Institute of Economics & EMbeDS, Scuola Superiore Sant' Anna Pisa



Supported by the European Commission, DG Employment, Social Affairs and Inclusion, VS/ 2019/0077

^{*} The preliminary activity of research, choice and collection of national collective bargaining agreements has been carried out by the Office IV - Collective Agreements' Archive of Cnel. The information and views set out in this report are those of the author and do not necessarily reflect the official opinion of the Cnel.

Acknowledgements

The COLBAR-EUROPE project and its reports were made possible by the collective efforts of the teams at WageIndicator Foundation, Central European Labour Studies Institute (CELSI), National Council for Economics and Labour (Cnel) and the Amsterdam Institute for Advanced Labour Studies (AIAS-HSI) at the University of Amsterdam, and the associate partners ETUI, UNI Europa, Solidarność Katowice, Solidarność, Gdansk and CCOO Servicios. We thankfully acknowledge funding provided by the European Commission, DG Employment, Social Affairs and Inclusion, Project No. VP/2018/004/0008.

Disclaimers

The information and views set out in this report are those of the author(s) and do not necessarily reflect the official opinion of the European Union. Neither the European Union institutions and bodies nor any person acting on their behalf may be held responsible for the use which may be made of the information contained therein.

Table of Contents

| Table of Cor | tents | 3 |
|---|--|--|
| List of Figur | es | 3 |
| List of Table | s | 4 |
| Managemen | t summary | 5 |
| Sintesi (man | agement summary in italian) | 6 |
| Introduction | | 8 |
| 1. A brief de | escription of the Cnel-Colbar database | 10 |
| 2. Looking i | nside collective bargaining: an investigation on wages | 15 |
| 2.1 Wa | ge setting differences within and between sectors | 16 |
| | litional economic clauses: wage increases, seniority allowances and extra | 20 |
| 3. Early add | options of telework practices: what can we learn for the post Covid agenda? | 28 |
| 3.1 Fro | m European regulations to the law decrees during the pandemic | 29 |
| 3.2 Col | lective bargaining on telework: between limited diffusion and good practices | 31 |
| 4. Conclusi | ons | 35 |
| References . | | 37 |
| Appendix | | 39 |
| | | |
| List of Fi | gures | |
| | | |
| Figure 1 | National collective bargaining agreements by sectors (number) | 10 |
| Figure 2 | National collective bargaining agreements by macro sectoral groups (%) | 11 |
| Figure 3 | | |
| Figure 4 | National collective bargaining agreements by employers' type (number) | 11 |
| | National collective bargaining agreements by initial and final year of validity | 11 12 |
| Figure 5 | | |
| Figure 5 Figure 6 | National collective bargaining agreements by initial and final year of validity (number) | 12 |
| _ | National collective bargaining agreements by initial and final year of validity (number) | 12 16 |
| Figure 6 | National collective bargaining agreements by initial and final year of validity (number) | 12 16 16 |
| Figure 6 Figure 7 | National collective bargaining agreements by initial and final year of validity (number) | 12 16 16 17 |
| Figure 6 Figure 7 Figure 8a | National collective bargaining agreements by initial and final year of validity (number) | 12 16 16 17 18 |
| Figure 6 Figure 7 Figure 8a Figure 8b | National collective bargaining agreements by initial and final year of validity (number) | 12 16 16 17 18 |
| Figure 6 Figure 7 Figure 8a Figure 8b Figure 9a | National collective bargaining agreements by initial and final year of validity (number) | 12 16 16 17 18 18 |
| Figure 6 Figure 7 Figure 8a Figure 8b Figure 9a Figure 9b | National collective bargaining agreements by initial and final year of validity (number) | 12 16 16 17 18 18 18 |
| Figure 6 Figure 7 Figure 8a Figure 8b Figure 9a Figure 9b Figure 10a | National collective bargaining agreements by initial and final year of validity (number) | 12 16 16 17 18 18 18 19 |
| Figure 6 Figure 7 Figure 8a Figure 8b Figure 9a Figure 9b Figure 10a Figure 10b | National collective bargaining agreements by initial and final year of validity (number) | 12 16 16 17 18 18 18 19 |

| Figure 14a | Kernel density of the structural wage increase expressed as amount | 22 |
|------------|--|----|
| Figure 14b | Kernel density of the structural wage increase expressed as % of the monthly minimum wage | 22 |
| Figure 15a | Box-plot of the structural wage increase by sectors | 23 |
| Figure 15b | Box-plot of the structural wage increase by macro-sectoral groups | 23 |
| Figure 16 | National collective bargaining agreements by clause on seniority allowance (number) | 23 |
| Figure 17 | National collective bargaining agreements by type of seniority allowance (number) | 23 |
| Figure 18 | Number of years required to obtain the seniority allowance | 24 |
| Figure 19a | Kernel density of the "biennial" seniority allowance expressed as amount | 24 |
| Figure 19b | Kernel density of the "biennial" seniority allowance expressed as % of monthly wage | 24 |
| Figure 20a | Box-plot of the "biennial" seniority allowance (%) by sectors | 25 |
| Figure 20b | Box-plot of the "biennial" seniority allowance (%) by macro-sectoral groups | 25 |
| Figure 21 | National collective bargaining agreements by clauses on additional monthly payments (number) | 26 |
| Figure 22 | National collective bargaining agreements by type of additional monthly payments (number) | 26 |
| Figure 23 | National collective bargaining agreements by ranking (number) | 27 |
| Figure 24 | Ranking and minimum wages by macro-sectoral groups | 27 |
| Figure 25 | National collective bargaining agreements by clauses on remote working (%) | 31 |
| Figure 26 | Sectors by clauses on remote working (number) | 31 |
| Figure 27 | Macro sectoral groups by clauses on remote working (number) | 32 |
| Figure 28 | Degree of detail of clauses on telework in the selected collective bargaining agreements | 32 |
| List of Ta | ables | |
| | orkers covered by collective bargaining agreements over the total workforce in the rresponding sector (number and %) | 13 |
| Table 2 Ma | cro sectoral groups and corresponding number of agreements at 2-digit | 40 |

sectors.....

telework/smart working

41

Table 3 List of national collective bargaining agreements: title, sector and clause on

Management summary

Collective bargaining at sectoral level plays a key role in the Italian two-tier industrial relations system and is in fact its dominant feature. While sectoral collective bargaining covers about 90% of workers, company-level bargaining affects only a minority of Italian firms (between 20 and 30%). The unionisation rate is one of the highest in Europe, even though retired workers account for a large proportion of union members. National collective bargaining agreements (hereafter NCBAs) define the minimum wages through pay scales that distinguish the workforce according to the sectoral classification system. The agreements set working hours, workers' rights (paid leave, right to study, etc.). In general, they constitute a unique source of information on working conditions within a sector.

The process of selection, collection and annotation of the Italian collective agreements carried out by the Cnel as a partner in the Colbar project makes it possible to deepen knowledge and understanding of the contents of the agreements, offering the possibility of developing accurate comparative analyses or in-depth studies on specific topics of interest. The 89 agreements that make up the Cnel Italian database provide a sufficient degree of sectoral heterogeneity. Moreover, most of the agreements are still in force (the texts were signed between 2010 and 2020), and most of the expired agreements have not yet been renewed. Moreover, the subset constituted by private sector agreements covers about 40% of the entire private workforce. After having described the database, the report focuses on two main topics: the wage bargaining system and the regulation of remote work (in particular teleworking).

First of all, we study the determination of wage scales within collective agreements, looking in particular at the wage differences between the lowest and highest occupational categories within each job classification scheme. Subsequently, we focus on additional sources of income such as wage increases, seniority allowances and additional monthly payments. The role of collective bargaining at sectoral level is particularly important for what concerns the wage floors. In fact, given the absence in Italy of a legal minimum wage, sectoral minimum wages are usually applied to those workers who are not covered by the national agreements. From the analysis, we find: i) significant wage dispersion among top and bottom occupational levels; ii) low wage increases on average; iii) the provision in almost all agreements of one additional monthly payment and a more limited diffusion of a second extra monthly payment. The second part of the report focuses on teleworking, that today represents an important subject of debate within and outside the workplace. In fact, the outbreak of the Covid-19 pandemic in 2020 has caused a disruptive re-organisation of the entire world of work in order to reduce the spread of the virus and ensure the continuation of production and service activities. This has certainly renewed collective interest in issues such as health and safety in the workplace, work organisation and most of all, the adoption of remote working practices. Trade unions have been involved in several activities at company level from the outset of the health crisis, precisely because their involvement was pivotal to the development of safety protocols. In this report, we take a step back and look at both the degree of diffusion and the content of clauses on remote working in agreements signed before the beginning of the pandemic. The results show that remote working is regulated in 30% of the agreements under analysis and that in most cases the clauses are quite detailed, in line with the European Framework Agreement on Teleworking signed in 2002. However, there are a number of issues on which more extensive regulation might be necessary. These include the risk of unpaid overtime, the provision of adequate equipment, the offer of specific training courses, the effective protection of health and safety and the limitation of surveillance and control systems on workers.

Sintesi

La contrattazione collettiva a livello settoriale gioca un ruolo chiave nel modello italiano di relazioni industriali a due livelli e ne rappresenta di fatto la sua caratteristica dominante. Infatti, mentre la contrattazione collettiva settoriale copre circa il 90% dei lavoratori, la contrattazione a livello aziendale riguarda solo una minoranza delle aziende italiane (tra il 20 e il 30%). Il tasso di sindacalizzazione in Italia è uno dei più alti d'Europa, anche se i lavoratori pensionati rappresentano una parte importante degli iscritti al sindacato. I contratti collettivi nazionali di lavoro (CCNL) definiscono i minimi salariali attraverso tabelle retributive che distinguono diversi livelli di inquadramento della forza lavoro. I contratti collettivi stabiliscono inoltre l'orario e l'organizzazione del lavoro, i diritti dei lavoratori (congedi retribuiti, diritto allo studio, ecc.). In generale, essi costituiscono una fonte unica di informazioni sulle condizioni di lavoro all'interno di un settore.

Il processo di selezione, raccolta e annotazione dei contratti collettivi italiani realizzato dal Cnel come partner del progetto Colbar permette di approfondire la conoscenza e la comprensione dei contenuti dei contratti, offrendo la possibilità di sviluppare accurate analisi comparative o studi mirati su specifici temi di interesse. Gli 89 contratti che compongono il database italiano del Cnel forniscono un sufficiente grado di eterogeneità settoriale. Inoltre, la maggior parte di essi risulta ancora in vigore (gli accordi sono stati firmati tra il 2010 e il 2020), e molti dei contratti scaduti non sono stati ancora rinnovati. Inoltre, il sottoinsieme costituito dai contratti collettivi appartenenti al settore privato copre circa il 40% dell'intera forza lavoro privata. Dopo aver descritto il database, il report si concentra su due temi oggi di grande interesse: il sistema di contrattazione salariale e la regolamentazione del lavoro a distanza (in particolare il telelavoro).

Prima di tutto, studiamo il sistema di determinazione dei minimi salariali all'interno della contrattazione settoriale, guardando in particolare alle differenze salariali tra le categorie professionali più basse e più alte all'interno di ogni schema di classificazione del lavoro. Successivamente, concentriamo l'analisi sulla presenza all'interno della contrattazione di fonti aggiuntive di reddito come gli aumenti salariali, gli scatti di anzianità e le retribuzioni mensili aggiuntive. Il ruolo della contrattazione collettiva a livello settoriale è assolutamente cruciale per quanto riguarda la definizione dei minimi salariali, data l'assenza in Italia di un salario minimo legale e la frequente estensione dei salari minimi settoriali a quei lavoratori che non risultano coperti dai contratti nazionali di categoria. Dall'analisi, osserviamo la presenza di: *i)* una significativa dispersione salariale tra livelli occupazionali (primo ed ultimo); *ii)* bassi aumenti salariali in media; *iii)* una mensilità aggiuntiva in quasi tutti gli accordi ed una diffusione più limitata di una seconda mensilità extra.

La seconda parte del report si concentra sul telelavoro, attualmente argomento di dibattito dentro e fuori i luoghi di lavoro. Lo scoppio della pandemia Covid-19 nel 2020 ha infatti reso necessaria una radicale riorganizzazione dell'intero mondo del lavoro per ridurre la diffusione del virus e garantire la prosecuzione delle attività produttive e dei servizi. Ciò ha sicuramente risvegliato l'interesse collettivo su temi quali la salute e la sicurezza nei luoghi di lavoro, l'organizzazione del lavoro e soprattutto l'adozione di pratiche di lavoro a distanza. Fin dall'inizio della crisi sanitaria, i sindacati sono stati impegnati in attività di contrattazione a livello aziendale, proprio perché il loro coinvolgimento è risultato cruciale per lo sviluppo dei protocolli di sicurezza. Nel report facciamo un passo indietro nel tempo ed esaminiamo il grado di diffusione ed il contenuto delle clausole sul lavoro a distanza negli accordi firmati prima dell'inizio della pandemia. I risultati mostrano che il lavoro a distanza è regolato nel 30% degli accordi analizzati, e che nella maggior parte dei casi le

clausole sono abbastanza dettagliate, in linea con quanto definito nell'Accordo Quadro Europeo sul Telelavoro firmato nel 2002. Tuttavia, emergono una serie di questioni su cui potrebbe essere necessaria una regolamentazione più ampia. Tra questi, il rischio di lavoro straordinario non pagato, la fornitura di attrezzature adeguate, l'offerta di corsi di formazione specifica, l'effettiva protezione della salute e della sicurezza e la limitazione delle pratiche di sorveglianza e controllo sui lavoratori.

Introduction

With the burst of the great recession in 2008 and the subsequent Euro crisis in 2010, the socio-economic scenario characterised by a production slowdown, the rise of unemployment and the implementation of austerity measures has put European industrial relations under stress (Leonardi and Pedersini, 2018). This pressure undoubtedly accelerated the push towards a neoliberal reconfiguration of collective bargaining that was already at stage in the previous decades, as pointed out by several scholars (Baccaro and Howell, 2017). Nowadays, the emergence of non standard employment, the decreasing union rates and the institutional policies aimed at decentralising bargaining for reasons of competitiveness are some of the main features of the industrial relations landscape in several European countries.

However, a number of papers and case studies assesses a certain degree of resilience of national industrial relations' structures that, despite severely weakened, have still maintained their core characteristics (Carrieri et al., 2018) or have responded differently to economic downturns (Picot and Tassinari, 2017). In Italy, the bargaining system has preserved its two-tier model (formally regulated in 1993) with a dominant national industry bargaining and an under-diffused company-level bargaining.

Relevant novelties have been introduced from the tripartite agreement in July 1993 that defined the two-tier national bargaining system, distinguishing the roles of bargaining at sectoral and company level. First, the agreement in 2009 not signed by CGIL that modified the length of NCBAs (from 4 to 3 years), set a new system of wage increase to account for inflation and introduced a "cooling clause" to avoid strikes during the six months before (and one month after) the agreement's expiration. Then, the national agreement signed by the three main trade unions and Confindustria in June 2011 recognised the possibility for company agreements of derogating from clauses defined at sectoral level once this eventuality was already allowed in the corresponding NCBA. Moreover, several agreements were signed by national social partners concerning the definition of indicators of representativeness after 2011.

The "ambivalent" nature of the Italian industrial relations, characterised by trade unions' historical collective autonomy, low degree of institutionalisation and incomplete regulation (as clearly depicted by Pulignano et al., 2018), certainly contributes to its fragility and instability, as the strained evolution of social dialogue has shown in recent decades.

At the same time, the political debate on labour market rigidities has been shaken by a tentative paradigm change. During the 90s, protections against dismissals and strong trade unions have been described as a source of inefficient rigidities in the labour markets. Nowadays, an increasing number of studies show how they can play a role in fostering firms' innovation (Cetrulo et al., 2019, for a review see Kleinknecht, 2020), fighting income inequality and stimulating economic growth (Jaumotte and Buitron, 2020; Stansbury and Summers, 2020).

Moreover the Covid-19 pandemic and the necessity to organise the entire world of work in order to reduce the spread of the virus and guarantee the continuation of production and service activities has renewed the public interest in workplace health and security, work organisation and flexible arrangements. Trade unions around the world have been on the forefront of the response to this unforeseen event, as their active involvement was needed to put in place strict protocols on work organisation (for a description of Italian collective bargaining during the pandemic, see Leonardi et

al. (2021)). In Europe, several agreements have been signed in order to define new rules at all levels of bargaining.¹

As an indirect effect of the pandemic, the content of collective agreements has become a subject of public interest, whereas in the usual times it would only have concerned social partners and interested scholars. Nevertheless, it is extremely difficult to capture a comprehensive picture of industrial relations' undergoing changes, since collective agreements are not easily available. Even once they are available, the reading and comparison of their content can be time consuming due to the lack of codified and standardised datasets.

The Wage Indicator Foundation has been collecting data over time on collective agreements exactly with the aim of allowing workers and trade unions to enrich their knowledge on industrial relations and stimulating comparative analyses within and between countries.

The BARCOM project, financed by the European Union in 2016-2018 collected and compared 120 agreements from the commerce sectors in 23 countries (Besamusca et al., 2018). With the COLBAR project, a further step is made towards a higher level of understanding of industrial relations.

In this report the focus will be exclusively on the Italian collective agreements at the sectoral level (NCBAs) and detailed analysis will be performed on two topics of interest: the wage setting and the adoption of flexible arrangements for remote working. The first chapter illustrates the database, describing in particular the sectoral coverage and the time validity of the agreements under study. The second chapter scrutinises collective agreements' clauses on wage floors and additional sources of remunerations. The third chapter studies the degree of diffusion and the quality of clauses of telework and smart working, after having briefly sketched a synthesis of the Italian regulation of remote working. The last section sums up the main results of the report, suggesting possible avenues for future research.

¹ See the webpage of ETUI on "Covid Social Impact. Monitoring social and employment consequences of the Covid-19 in the EU-27" https://www.etui.org/covid-social-impact.

1. A brief description of the Cnel-Colbar database

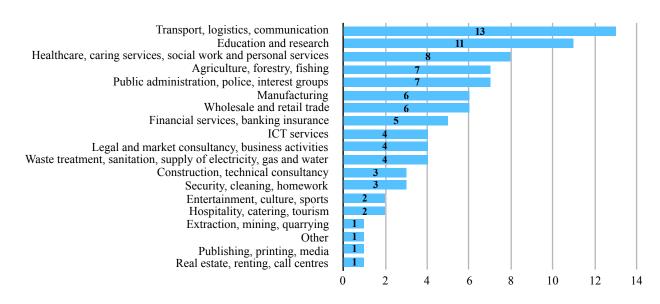
The Italian sample is composed by 89 national collective agreements, selected and made available by the National Council of Economy and Labor (Cnel).²

The Italian set of agreements is composed mainly by national collective agreements at sectoral level, few national agreements regarding particular type of workers (collaborators of non state universities and private research institutes) and some economic agreements.³ The sampling procedure to build this database was carried out by the Cnel with the aim of providing a highly representative and up-to-date dataset. In this chapter, we illustrate its main characteristics, looking in particular at sectoral heterogeneity, time coverage and degree of representativeness in terms of number of workers covered by the agreements. A brief presentation is necessary in order to contextualise the analysis performed in the following chapters, where we study in details the wage settings and the arrangements on remote working practices.

The analysis of national collective bargaining agreements at sectoral level is extremely important since they represent one of the main building blocks of the Italian industrial relations system. In fact, the bargaining system in Italy can be defined as "rather centralised and weakly coordinated" where: i) sectoral agreements are predominant, ii) extensions are often applied, iii) derogations at company levels are admitted in a limited way (Oecd, 2019 and Garnero, 2020). In addition, recent regulatory interventions can be interpreted as a form of "centralised decentralisation", since the push towards decentralisation originated mainly from central political bodies and did not prove so effective (Carrieri et al., 2018).

First of all, looking at a 2-digit broad classification of sectors, we observe that the agreements ensure a sufficient degree of heterogeneity in terms of sectoral coverage, since 18 different economic activities are present. As we can see from **Figure 1**, among the most represented sectors we can list transport, logistics and communication, education and research, healthcare and caring service, agriculture, manufacturing and public administration.

Figure 1 National collective bargaining agreements by sectors (number)

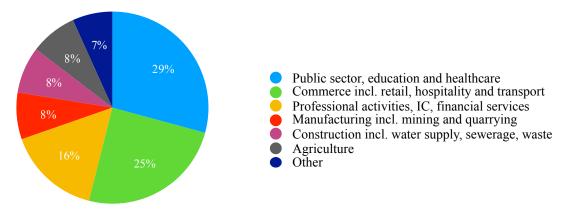


² The Italian Constitution establishes the foundation of Cnel (art.99) as an advisory body to the Chambers and the Government, performing the functions assigned to it by the law.

³ The complete list of the agreements is provided in the Appendix, Table 3.

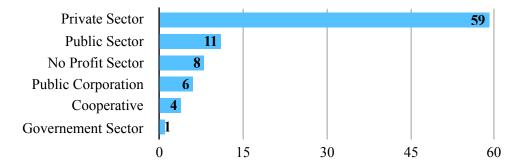
Moreover, for reasons of comparability, we also refer to a more aggregate classification of sectors, distributed as shown in **Figure 2**.⁴

Figure 2 National collective bargaining agreements by macro sectoral groups (%)



Consistently with Figure 1, the most represented macro groups correspond to education, health, commerce, hospitality, transport, followed by professional activities, information and communication and financial service. The NCBAs exhibit also a certain variety in terms of employers' type, as illustrated in **Figure 3**, since agreements include not only the private sector, but also cooperatives, no profit companies, public corporations and the public sector.

Figure 3 National collective bargaining agreements by employers' type (number)



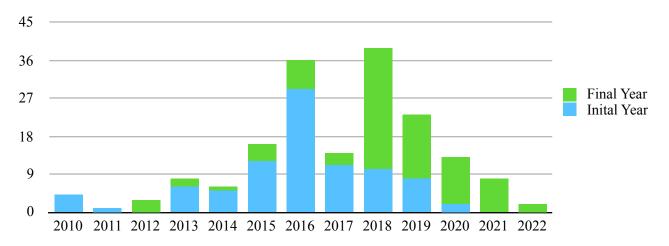
Information on the temporal validity of the NCBAs can be easily found in the agreements, as the text usually reports at the beginning the period of validity (more exactly the initial and final dates) or it includes a specific clause where duration and renewal procedures are specified. From **Figure 4** we see that most of the NCBAs has been subscribed in the last four years (2016-2020). Despite many agreements have actually overcome their period of validity, normally corresponding to three years, the clauses regarding the economic treatment of workers are still in force, as imposed by the law. Increasing delays of social partners in renewing agreements is indeed a structural problem. According to the last report of Cnel, in 2020 77% of workers in the private sector are waiting for renewal (Biagiotti et al., 2021). According to Istat, in September 2020 the waiting time for renewal was equal to 16,6 months for private workers and 17,9 months for all worker.⁵ Despite the formal expiration defined by the agreement, NCBAs are still cogent until renewal. However, these structural delays weaken the bargaining process and can also contribute to the substantial stagnation

⁴ The conversion table from the 2-digit sectors to the macro sectoral groups is provided in the Appendix, Table 2.

⁵ Data are taken from https://www.istat.it/it/files//2020/10/Retribuzioni contrattuali LUGLIO-SETTEMBRE 2020.pdf.

of annual wage growth. It is worth to recall that, with the national tripartite pact of 1993 a temporary and supplementary remuneration (the so-called "Contractual Vacancy Allowance") paid by the employer during the waiting period was introduced exactly to reduce the risk of erosion of workers' bargaining power, but in 2009 this obligation was converted into a voluntary provision left to the willingness of social partners.

Figure 4 National collective bargaining agreements by initial and final year of validity (number)



In the Italian sample there are mainly sectoral agreements valid nationwide, with the exception of one agreement regarding a specific research foundation located in the autonomous province of Bolzano.⁶ Moreover, the national agreement on the flight transport is composed of different and distinct sections, each one regulating a specific group of workers (foreign airline ground staff, carriers, handlers and catering staff). Therefore, the four agreements can be conceived as separate parts, even if they all refer to the general framework provided by the national agreement on the flight transport.

The Italian database provides a comprehensive picture of industrial relations at sectoral level thanks to its heterogeneity and it also results to be highly representative of the private workforce. In fact, despite the agreements under study constitute only a small part of all on-going agreements collected by the Cnel, the private subset of agreements covers the 40% of all private employees. This information is gathered thanks to a recent agreement between Cnel and Inps, that allows to match the Cnel code and the Inps code of each national collective bargaining agreement in the private sector. In this way, qualitative and quantitative information on each agreement can be merged with data on the number of firms and workers covered by its clauses.

The collaboration between the two national institutes is extremely valuable for several reasons. First of all because it can help policy makers in understanding to which extent collective agreements are applied within firms and which agreements are the most representative. Secondly, it also enables scholars to assess social dumping dynamics, identifying those firms that do not apply the minimum wage defined by the correspondent sectoral agreements (on firms' "non compliance" to minimum wages see Garnero, 2018; Garnero and Lucifora, 2020). For instance, exploiting the availability of these data, Lucifora and Vigani (2020) estimate that wages defined in "pirate" collective agreements, which are agreements signed by unofficial social partners or misallocated with respect to the real economic activity of the firm, are about 15% lower than the ones defined by representative agreements.

⁶ Italian transnational agreements are analysed in the report on transnational agreements.

The increasing fragmentation of collective bargaining and the diffusion of pirate agreements is indeed a highly concerning issue. In order to understand the magnitude of this problem, it is sufficient to recall that the current archive collected by the Cnel for the private sector is made by 856 agreements, but only 60 agreements cover the 89% of the entire workforce, implying that the remaining 796 agreements cover only a small minority of the workforce (11%).

This confirms, from one side, the enduring presence of a small set of agreements able to cover the vast majority of employees. But, on the other hand, it reveals the existence of several cases of non compliance with the rules agreed by the main social partners, which in turn implies scarce recognition of workers' rights and unfair remunerations, well below the minimum wages set at sectoral level. This is the case of the service sector, that counts 213 different national agreements, with 5 agreements covering the 85% of the workforce and the remaining 208 agreements affecting the 15% of the workforce.

Going back to our database, detailed information in terms of the number of firms and employees following the agreements is available for 51 over 59 agreements of the private sector. According to our elaborations based on 2018-2019 ISTAT-INPS data, 7,393,491 private employees are interested by the clauses of 51 agreements contained in the dataset. Taking as total amount of employees occupied in the private sector the value of 2018 equal to 17,287,8908, we estimate that more than the 40% of all private employees are interested by the clauses contained in our sample. In particular, among the most representative agreements in terms of workers employed in the corresponding economic sector, we can cite the service, metal and logistics sectors.

Table 1 Workers covered by collective bargaining agreements over the total workforce in the corresponding sector (number and %)

| NCBA | Sector | Employees (covered by the NCBA) | Employees (total in the sector) | % |
|--|--|---------------------------------------|---------------------------------------|------|
| Distribution and services companies employees (2015-2019) | Retail and wholesale trade | 2,315,412 | 3,423,186 | 67.6 |
| Metalworkers (2016-2019) | Manufacturing | 1,480,456 | 3,726,511 | 39.7 |
| Catering and tourism companies employees (2018-2021) | Hospitality, catering, tourism | 502,720 | 1,558,586 | 32.2 |
| Logistics, goods transport and forwarding (2013-2015) | Transport, logistics, communication | 473,418 | 1,128,889 | 42 |
| Credit, financial and instrumental enterprises' executive and professional workers (2015-2018) | Financial services, banking, insurance | 313,260 | 542,575 | 57.7 |

Before concluding this brief presentation, it is worth to recall that one of the main functions of Cnel is exactly to build an archive on national collective bargaining agreements, as defined the Italian law n.936/1986 (art.10bis and art.17). According to the law, trade unions and employers are supposed to deposit agreements at Cnel within 30 days from their subscription, and Cnel is in charge of building and update a public archive containing all the agreements, also providing a periodic report to the interested institutions. Therefore, through this massive and continuous work of collecting, classifying and systematising agreements, the Cnel fulfils one of its main tasks.

 $^{^{7}}$ Data taken from Biagiotti et al. in Cnel (2021,pp.234-5).

⁸ Istat data available at the website http://dati.istat.it/Index.aspx?DataSetCode=DICA ADIPWP.

Moreover, the availability of updated sources on collective bargaining can facilitate the dialogue between social partners. In this direction, the Inter-confederal Agreement (IA) "Patto per la fabbrica" has been signed between the three main trade union confederations (Cgil, Cisl and Uil) and the main employers' association (Confindustria) in May 2018. The agreement recognised to Cnel the role of detecting perimeters of collective bargaining both with regard to its content and to the degree of representativeness of the signatory parties. The ambitious goals of the IA are to clarify better the representativeness of both trade unions and employers' organisations, to detect the most relevant NCBAs and to address the increasing problem of fragmentation, non compliance with sectoral clauses and diffusion of pirate agreements.

Collective agreements can be freely downloaded from the website of Cnel, where an additional tool of "advanced research" is provided for those willing to perform extensive qualitative analyses on the national collective agreements' content. In fact, 4520 collective agreements have been already uploaded online and annotated by the Cnel through a coding system that enables to identify those sections of the original text where specific topics are discussed. This tool allows to perform analysis on wages, temporary leaves, trade union rights, working hours, work organisation, tasks, health and safety policy. The research can be filtered by type of sector and agreement, date of subscription and period of validity. Even longitudinal analysis can be performed both within and across sectors. The coding system elaborated by the Cnel shows similarities with the one developed over time by the Wage Indicator Foundation and applied in the COLBAR project (Ceccon and Medas, 2021).

In general, the adoption of coding schemes underlines the importance of developing extensive and comprehensive methods of analysis in order to obtain synthetic and comparable data on collective agreements. Furthermore, a new and constantly updated section on firm-level and sectoral agreements related to Covid-19 has been created by the Cnel to keep track of industrial relations and bargaining activities during the pandemic, in particular for what concerns the firm-level adoption of health and safety protocols, the regulation of telework practices and the use of redundancy schemes.

⁹ All information can be found at https://www.Cnel.it/Archivio-Contratti.

2. Looking inside collective bargaining: an investigation on wages

The aim of this chapter is to illustrate the main characteristics of the Italian wage bargaining system through an analysis of wage-related clauses within the 89 Italian national collective bargaining agreements contained in Colbar.

As already explained, industry level bargaining is pivotal in regulating working conditions, working hours, and wage floors for each job category. Wages are then applied to all workers - irrespectively of their subscription to trade unions - employed in those firms belonging to employers' national organisations that sign the sectoral agreement. At the current stage, a clear extension mechanism for those firms not belonging to signatory organisations does not exist. However, the obligation of paying a remuneration "commensurate to the quantity and quality of the work" stated by the Constitution (art. 36), is usually interpreted by labor judges with the application to "uncovered" workers the wage that is bargained in the most representative collective agreement of their sectoral activity (the so called "functional equivalent"). In other words, the wage pay-scales defined by sectoral agreements are considered by labor law as "fair amount" from which the value of workers' salary may increase but not decrease.¹⁰

Despite the majority of companies result to be covered by NCBAs with an industry bargaining coverage rate of 80-90% (Oecd, 2020), the increasing fragmentation of social partners and the diffusion of pirate agreements has prompted a discussion on the introduction of the legal minimum wage. The necessity to ensure adequate minimum wages to promote the dignity of work, income equality and sustain aggregate demand has also been stressed recently in a directive of the European Commission (2020). More generally, the creation of homogenous instruments to ensure fair wages for all European workers represents one of the political objective of the mandate of President Von der Leyen.

Turning to Italian NCBAS, we see that all agreements contained in the database have clauses on wages, apart from one agreement introducing general clauses for the air transport sector that leaves to the four specific and distinct sections of the agreement the definition of wages according to the different workers' categories. Of the 88 agreements discussing about wages, detailed pay-scales are available within 82 agreement.¹¹

Wages are normally defined as monthly wages, as shown in **Figure 5**. Since 15 agreements define wages as yearly and 1 agreement as hourly, we converted the corresponding values to monthly wages in order to obtain a comparable measure and look at the entire wage distribution.¹²

Pay-scales provide different levels of wages for workers' categories, mainly according to the sectoral classification system that distinguish workers in terms of job level and tasks. This holds for the majority of the agreements (78). Other criteria can be also applied in rare cases such as the firms' size (in one agreement on social care workers distinction is made in terms of managing bodies and start-ups) or tenure (it is case of aircraft pilots, where the wage differential is mainly due to the pilots' experience measured by the working hours spent flying).

¹⁰ For a recent discussion on the Italian wage setting system, see Treu (2019).

¹¹ No pay-scale is provided, for instance, in the case of temporary employment agencies where wages are set by the hiring firms, non-state universities employees and private research institutes IRCCS that follow wages defined by comparable categories of workers.

¹² Yearly wages have normally been converted dividing annual wages by 12 months. For those 15 agreements displaying yearly wages, we checked if the yearly wage was considering also some extra wage (like Christmas bonus) to avoid over estimations. For what concerns the agreement displaying hourly wage, given the lack of clear information in terms of working hours, we applied the maximum level of weekly hours set by the law (40 hours) to get the monthly wage. Despite reference is usually made to hourly wages, we focus on monthly wage to avoid missing values and miscalculations.

Figure 5 National collective bargaining agreements by pay-scales time basis (number)

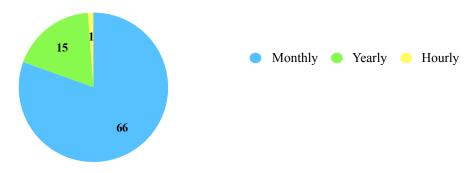
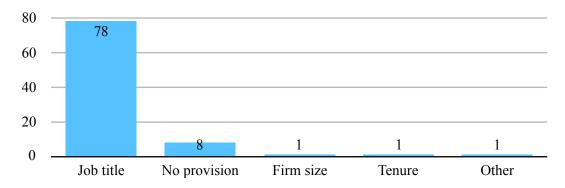


Figure 6 National collective bargaining agreements by pay-scales calculation basis (number)

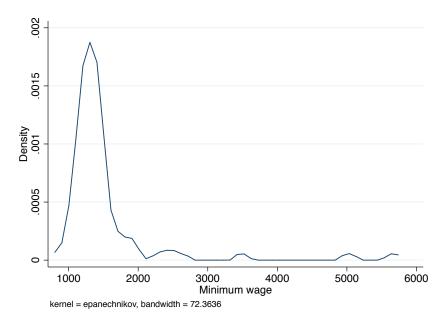


2.1. Wage setting: differences within and between sectors

First of all, we focus the attention on the minimum wage, that corresponds to the income paid to workers employed at the lowest level of the job classification. The minimum wage conveys important information and can be interpreted as an "entry" wage in a given economic activity. For instance, through the comparison of sectoral minimum wages and actual wages earned by the Italian workforce is possible to study the degree of firms' non compliance, estimating the number of workers that are paid less than the minimum level defined in their sector (see Garnero, 2018). Comprehensive minimum wages include different components (table minima, contingency allowance and distinctive pay element) usually summed into a unique amount and more rarely presented separately. In the following analysis, we always refer to the sum of the three components. We look at the overall minim wage distribution and from the kernel density represented in **Figure 7**, we can immediately detect strong differences across the distribution, which ranges from the bottom income of 875 euro (corresponding to the horticultural workers) to the top income of 5500 euro per month (corresponding to the executives of consortia and industrial development bodies). The majority of agreements is concentrated around the median wage value of 1300 euro, whereas few agreements are located over the right tail, where the highest wages are recorded (here we find, for instance, managers of credit and financial enterprises and public functionaries). Additionally, this figure shows that minimum wages are, on average, particularly low and not far from what Istat estimates as poverty threshold (around 1000 euro) for an individual with a family of two

components. This is the case of workers employed in agriculture, security services, cinema and theatres where the minimum monthly wage is lower than 1100 euro.

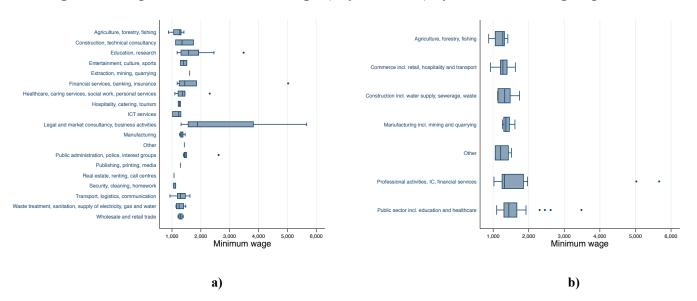
Figure 7 Kernel density of the minimum wage



How do wages differentiate across sectors? In the box-plots below, for each sector (box) we can get descriptive evidence on the median wage (line within the box), the interquartile range (size of the box) and the presence of outliers (points outside the box). The graphs also inform us about the scarce representativeness of a given sector: if a box corresponds to a single line, it implies that it is described by a unique agreement. From **Figure 8.a**, we see that the highest values of minimum income are recorded in the sectors of legal and market consultancy (where the average top-minimum wage is 2689 euro), financial, banking and insurance services (2149 euro). On the contrary, the sectors recording the lowest minimum wages are real estate, renting, call centres (1069 euro), security, cleaning and homework (1081 euro), ICT services (1187 euro), agriculture, forestry and fishing (1192 euro). In terms of within sector wage variability, we observe more heterogenous distributions in the sectors of legal and market consultancy, financial service, education, research and public administration.

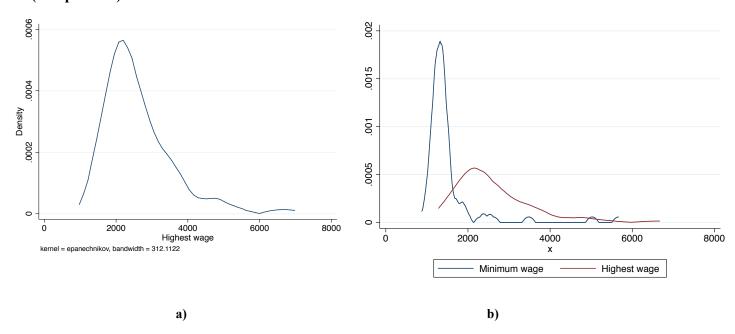
A similar analysis can be performed looking at the macro sectoral groups where differences are, however, less explicit because of the higher degree of aggregation (**Figure 8.b**). Again, it emerges the leading role of sectors like professional activities, information and communication and financial services (average minimum wage equal to 2028 euro), followed by the education and healthcare (1633 euro). On the other hand, the lowest wages are recorded in the sectors of agriculture, forestry and fishing (1192 euro) and commerce (1287 euro).

Figure 8 Box-plot of the minimum wage a) by sectors, b) by macro-sectoral group



Together with the minimum wages, pay-scales provide an entire range of wages corresponding to the job levels defined by each sectoral classification system. Therefore, the analysis can be enriched if we look, for each agreement, not only at the minimum wage but also at the top salary, that is the remuneration earned by a worker on the top of the occupational structure (usually managers, directors, etc.)¹³.

Figure 9 Kernel density of a) the highest wage, b) the highest wage and minimum wage (comparison)



The kernel density of the highest wages depicted in **Figure 9.a-b** exhibits a less skewed distribution with respect to the minimum wage's one. Still, significant variability across NCBAs can be envisaged. In fact, the top wages go from 1286 euro (horticultural workers) to 6667 euro (managers of industrial development bodies), with an average value of 2611 euro and a median value of 2386 euro. It is worth mentioning that the top wages of some sectoral agreements correspond to the

¹³ It is important to recall that wages of jobs like chief executive officers within companies are usually bargained outside the collective agreements.

bottom wages of other sectors, as shown in **Figure 9.b** by the superposition of the two densities in the area around 1500 euro. This is the case of some agriculture workers, that record very low top wages, ranging between 1286 and 1556 euro or port and fishing vessel workers with top wages equal to 1590 euro.

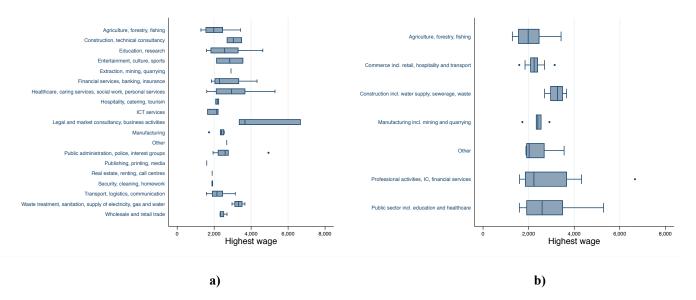


Figure 10 Box-plot of the highest wage a) by sectors, b)by macro-sectoral groups

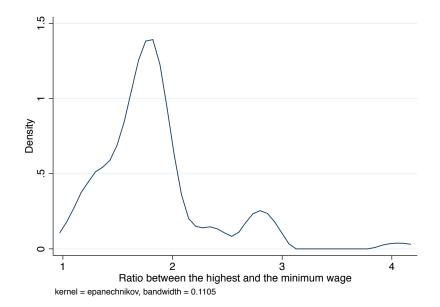
Concerning sectoral differences, we can see from **Figure 10.a** that the highest wages are set in the legal and market consultancy sector (average highest wage equal to 4564 euro) well above the second highest top wage recorded in the sector of waste treatment, sanitation etc. (3315 euro). Conversely, the lowest top wages are recorded in the sectors of publishing, printing, media (1600 euro), real estate, renting and call centre (1892 euro), security, cleaning and homework (1904 euro). A similar reasoning can be applied to **Figure 10.b**.

Since for each agreement with pay-scales we were able to retrieve and collect information on the lowest and the highest wage, we can easily look at the ratio between the two. In this manner, we attempt to approximate some measures of inequality and wage dispersion within sectoral collective agreements. This inequality turns out to be related to the job level, as the majority of the agreements differentiates wages according to the job level.

Industrial relations scholars have been studying extensively the impact of collective bargaining on wages, usually looking at differences between companies covered by industry bargaining and firms covered only by firm-level bargaining. Despite controversial debates, many contributions to the literature confirm the existence of a wage premium for those firms under industry collective agreements, as they tend to pay higher and less dispersed wages with respect to uncovered firms. Moreover, industry agreements usually increase wages for low-skilled workers, whereas company agreements increase wages for high skill workers (Magda et al., 2012). It is therefore interesting to look at these variables, even if only for descriptive purposes.

We see that the kernel density of the ratio between the highest and the minimum wage varies across collective bargaining agreements. Workers holding top positions in the occupational structure can earn up to 4 times the wage of the workers employed in the bottom job category of the same sector, with a range of wage difference that goes from 120 euro to 3990 euro. In the majority of the agreements under study top wages are 1-2 times higher than the corresponding minimum wages.

Figure 11 Kernel density of the ratio between the highest and minimum wage



We can make some final considerations, starting from the results of the descriptive analysis just presented. First, all NCBAs differentiate wages in terms of job classification schemes. Few agreements where the workers hold the same occupation without distinction of job levels, additional criteria as the size of the firms can be applied. Wage floors are strongly heterogeneous across sectors. However, to better assess and qualify the drivers of these differences, the analysis should be enriched by the development of databases including a bigger sample of NCBAs, information on sectoral economic dynamics and union coverage data.

Secondly, the distribution of the minimum wage exhibits very low values, even close to the poverty line in those sectors characterised by precarious (tourism and catering) and gender segregated jobs (as in the case of cleaning). Moreover, differences in the minimum wage distribution are sparkling for those belonging to the top of the minimum wage distribution, which can earn up to 5500 euro per month.

Thirdly, the sectoral wage disparity between top and bottom job levels is quite relevant, being on average equal to 1143 euro per month (more than 13.000 euro per year). This confirms the importance of looking not only across, but also within sectors (and sectoral collective agreements) to detect internal sources of inequality related to the social division of labor.

2.2. Additional economic clauses: wage increases, seniority allowances and extra payments

Not only wage levels are defined at sectoral level, but also wage increase, allowances and extra payments. The provision of additional sources of remuneration is quite important, as it sustains workers' purchasing power, introducing supplementary and almost automatic sources of income. In this section, we focus the attention particularly on three clauses meant to increase workers' income: *i)* structural wage increase, usually calculated every year for the entire time span of the agreements' formal validity; *ii)* seniority allowances, related to the workers' tenure and usually provided every two years of tenure; *iii)* extra payments such as an additional monthly wage distributed during the month of December (the so-called Christmas bonus).

The three clauses are explicitly defined as fixed components of workers' income in several agreements and they are the most frequent wage-related clauses being applied to all the workforce, regardless occupational category, working time and performed tasks, as it is instead the case with overtime and hardship allowances. Given that our aim is to offer a comprehensive and generally comparable representation of the main wage determinants within national collective agreements, we will focus only on them, omitting however other possible sources of income.

Wage increase

The wage increase consists in a structural wage rise attributed to workers, usually every year (or semester) for the entire period of validity of the agreement. In our database, more than the 70% of NCBAs provide a wage structural increase, as shown in **Figure 12**. All workers are usually eligible, regardless the job level and/or the tenure. Moreover, no agreement links the allocation of the wage increase to performance indicators.

Figure 12 National collective bargaining agreements by pay rise clauses (%)

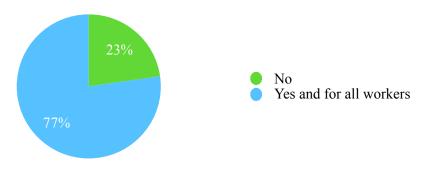
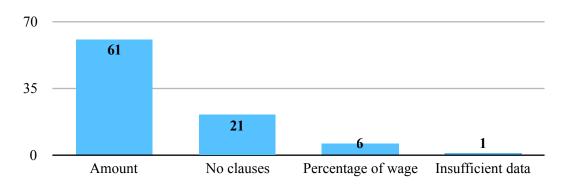


Figure 13 National collective bargaining agreements by pay rise type (number)



As shown in **Figure 13**, the pay rises are normally computed as monthly amounts, they are cumulated within pay scales and they differ according to workers' job level. Clauses on pay rise do not make specific reference to inflations. The provision of any mechanism of pay rise within industry agreements is extremely important if we consider the functioning of the bargaining system in Italy. Following the abolition in 1992 of the wage indexation scheme called "Scala mobile", originally meant to guarantee workers' purchasing power, the Social Pact in 1993 granted national bargaining the task of determining the automatic revaluation of wages based on inflation trends. Then, the Framework Agreement in 2009 introduced two important novelties: *i*) the setting of a three years variation in the harmonised index of consumer prices (HICP) computed by Istat as new benchmark for determining pay rise; *ii*) the possibility of recovery differences between the expected

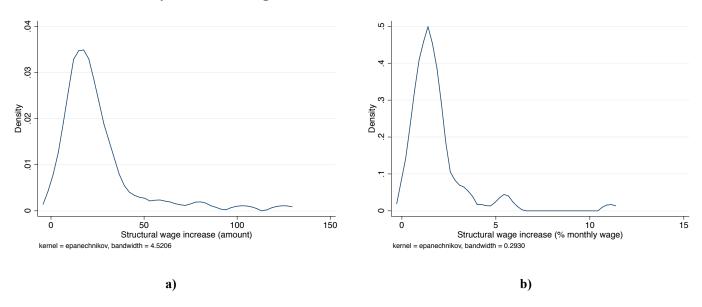
inflation and the real inflation. However, a three year span was immediately considered too long for adequately preserve workers' purchasing power. An interesting case is then the NCBA of metalworkers signed in 2016 that introduced a new experimental method of wages indexation to adjust the minimum wage on the basis of the inflationary trend, as measured by the HICP in the previous year. Successively, similar clauses have been adopted also in the commerce and wood sectors.¹⁴

At the same time, it is important to add that the provision of additional elements of remuneration is essentially demanded to the company level bargaining, where productivity and efficiency gains should be distributed among the workforce. During last years, firms have been granted generous fiscal incentives by the State exactly to put in place productivity bonuses through firm level agreements. However, this policy has resulted both ineffective in stimulating the rate of diffusion of second level bargaining (stuck at 20-30%), and also regressive in terms of wage distribution because the income payers who have benefited the most from fiscal discounts have been medium income ones, rather than low income workers (for details, see D'Amuri and Nizzi, 2018).

The recognition of a wage increase within industry level agreements remains therefore a central issue, representing in fact one of the most important topic discussed during agreements' renewals. Just to cite an example, the debate on the new metalworkers' agreement (whose hypothesis has been just signed by social partners in February 2021) was characterised by a strong conflict between trade unions and employers' association exactly on the amount of the wage increase.

As already done for the wage levels, we can look at the distribution of the wage increase, referred in this case exclusively to the lowest job level. In order to make an easier comparison, we look at pay rises as percentage of wages, since differences in absolute values can bias the estimations.

Figure 14 Kernel density of the structural wage increase a) expressed as amount; b) expressed as % of the monthly minimum wage



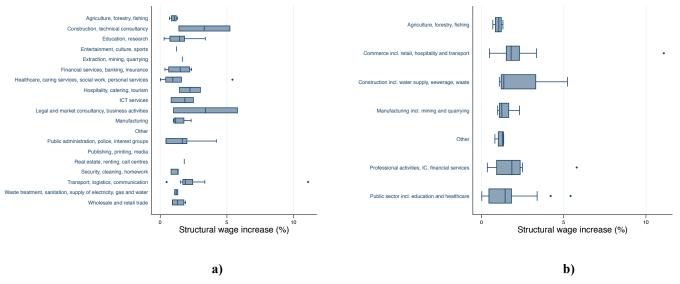
As we can see from **Figure 14.b**, the majority of wage increases ranges between 1% and 2% of the monthly wage, with the lowest value equals to 0.017% and the highest one equals to the 11%, with an average value of 1.8%. Concerning sectoral differences (**Figure 15.a**), the highest values of wage increases are recorded, on average, in the sectors of legal and market consultancy (3.4%), construction and technical consultancy (3.3%), transport, logistics and communication (2.69%). On the contrary, the lowest values of wage increase are recorded in agriculture, forestry and fishing

22

¹⁴ For details see D'Amuri and Nizzi (2018).

(1%), security, cleaning homework (1.16%) and waste treatment (1.19%). Looking at macrosectoral groups depicted in **Figure 15.b**, we get a slightly different picture because of higher degree of aggregation.

Figure 15 Box-plot of the structural wage increase a) by sectors; b) by macro-sectoral groups



Seniority allowances

Another important clause attains the recognition of allowances for acquiring tenure, measured by the years spent within a specific workplace. This provision is quite frequent, in fact in our database 68 agreements display clauses on seniority allowance (**Figure 16**). Interestingly, these agreements do not fully correspond to the 68 agreements exhibiting clauses on wage increases. As illustrated by the **Figure 17** displayed below, seniority allowances are normally expressed in monetary figures, even if few agreements provide wage's percentage or even a combination of wage's percentage and precise amount.

Figure 16 National collective bargaining agreements by clause on seniority allowance (number)

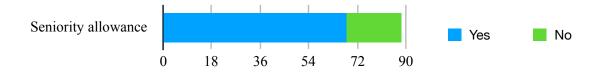
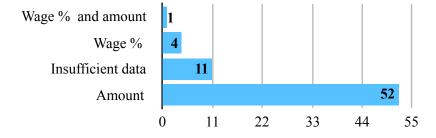
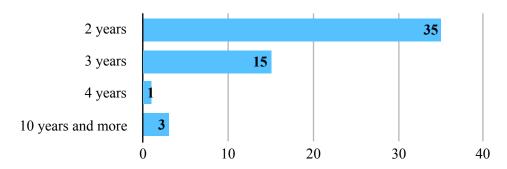


Figure 17 National collective bargaining agreements by type of seniority allowance (number)



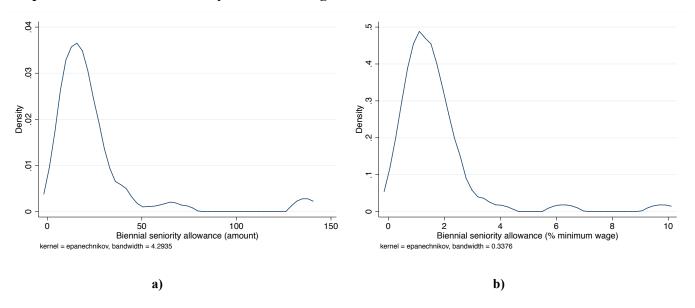
Different clauses attain the number of years ensuring the allocation of seniority allowance, even if in the majority of cases seniority steps are usually biennial (35 agreements) or triennial (15), as shown in **Figure 18**. Data on years are provided for 54 agreements.

Figure 18 Number of years required to obtain the seniority allowance



Given the variety of clauses on seniority, we compute for all agreements a "fictitious" seniority allowance provided every two years. Thus, the data showed in the following descriptive statistics are not the actual ones (apart from the 35 agreements already providing biennial seniority steps), but rather the result of author's elaboration. This procedure was necessary to get comparable estimates.

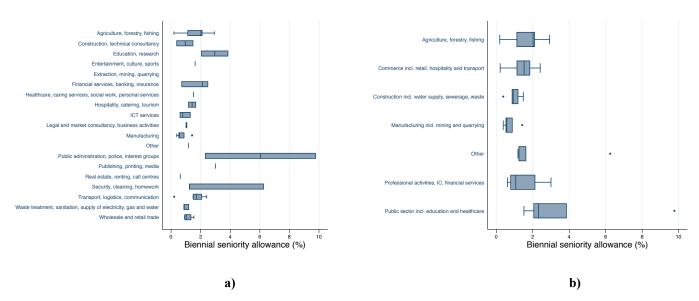
Figure 19 Kernel density of the "biennial" seniority allowance a) expressed as amount; b) expressed as % of the monthly minimum wage



From the density of the "biennial" seniority allowance expressed as share of the minimum wage (**Figure 19.b**) we see that in most of the cases, it ranges between 1% and 2%, with the minimum value equal to 0.19% for agriculture workers, and the biggest values paid to employees in international bodies (9.76%) and white collar workers in the security and cleaning sector (6.25%). If we look at sectoral differences (**Figure 20.a**), we observe that the highest allowances are recorded, on average, in the sectors of public administration, police and interest groups ("biennial" seniority share equal to 6%). On the contrary, the lowest "biennial" seniority allowances are recorded in the sectors of real estate, renting, call centres, manufacturing, ICT service and construction-technical consultancy (all below 1%).

A consistent representation is given by the **Figure 20.b**, where the macro sectoral group including the public sector, education and healthcare sectors outperforms the other groups.

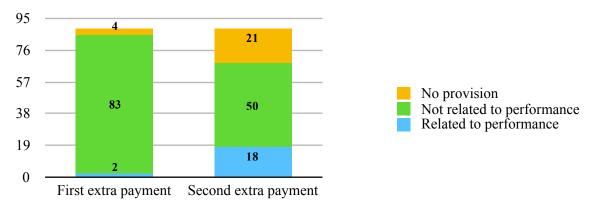
Figure 20 Box-plot of the biennial seniority allowance (%) a) by sectors; b) by macro-sectoral groups



Extra payments

The last type of clause we are going to investigate is the provision of additional monthly payments. These extra payments are usually coinciding with Christmas and Easter breaks and they are quite diffused within industry collective bargaining. This is confirmed from **Figure 21** below, where we see that 85 agreements have clauses on one additional payment and 68 agreements also provide a second additional monthly payment.

Figure 21 National collective bargaining agreements by clauses on additional monthly payments (number)



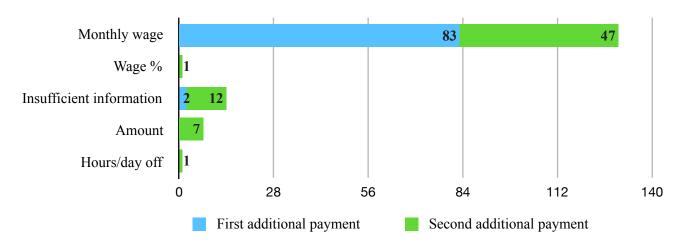
Both types of payments are eligible for all types of workers. However, they differ in what concerns the conditions under which they are provided. The first extra payment is not related to any performance indicator in almost all agreements.¹⁵ The second extra payment, instead, depends on productivity outcomes in 18 agreements over 68. Differences between the two extra payments also regard the type of payment: while the first extra bonus corresponds to an entire monthly wage and it is usually distributed during the month of December (the so-called "thirteenth" monthly payment), the second extra bonus corresponds to the entire monthly wage in 47 agreements ("fourteenth" monthly payment). Other less diffused types of additional payments consist in the provision of a

¹⁵ The only two exceptions are the agreement on the commercial craft and the temporary workers agency.

mixed amount, usually composed by a fixed basis and a variable part that will depend on specific performance goals (Figure 22).

Extra payments are thus largely diffused in our sample of collective agreements, as the majority of them provide at least one additional payment. On the other hand, bonus and performance-related payments are very rare, as they are normally not included in industry collective bargaining at sectoral level, but rather implemented at firm level. As already said, national collective bargaining agreements include several clauses related to workers' remuneration, as for instance the provision of overtime, night and holiday work allowances. However, the exclusive focus on the wage increase, the seniority allowance and the extra payments is motivated by the willingness of looking at the main components of the wage setting mechanism within collective bargaining, independently from the type of tasks performed, the number of working hours and so on.

Figure 22 National collective bargaining agreements by type of additional monthly payments (number)



To conclude this section, an interesting exercise would be to investigate how many agreements provide simultaneously several clauses that can be considered favourable to workers. Dummy variables are generated to distinguish if each agreement provides:

- i. High minimum wage (the dummy is equal to 1 if the minimum wage belongs to the third tercile of the minimum wage distribution, 0 otherwise);
- ii. Low wage dispersion (the dummy is equal to 1 if the ratio belongs to the first tercile of the ratio distribution, 0 otherwise);
- iii. High wage increase (the dummy is equal to 1 if the wage increase belongs to the third tercile of the wage increase distribution, 0 otherwise);
- iv. Seniority allowance (the dummy is equal to 1 if the agreement provides the seniority allowance, 0 otherwise);
- v. Two extra payments not related to performance (the dummy is equal to 1 if the agreement provides two extra monthly wages not related to performance, 0 otherwise).

We can therefore assign a ranking value to each agreement according to the number of favourable clauses it provides.¹⁶ Then, we can easily look at the co-occurrence of these conditions, to see how many agreements fulfil all of them. From **Figure 23**, we observe that only a small set of agreements is actually providing at the same time high minimum wages, low wage dispersion, high wage increases and additional allowances, whereas the majority shows a smaller combination of the investigated clauses. Furthermore, we combine information on ranking and minimum wages in

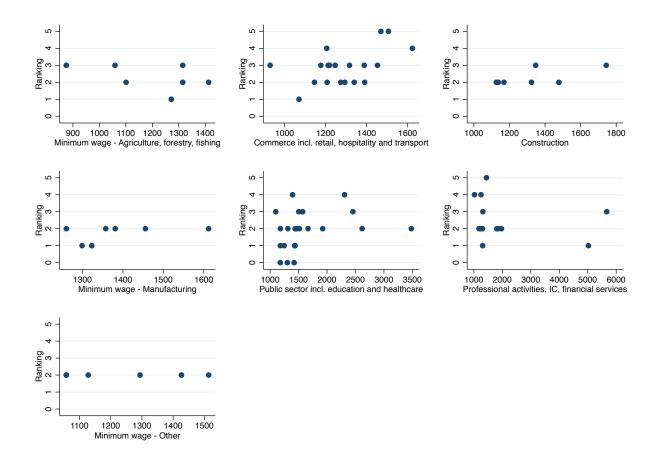
¹⁶ We do not impose any weight to the dummy variables in order to keep the reasoning simple.

Figure 24, where scatter plots of the variables are presented for each macro sector. We can immediately appreciate both the presence of high variability within sectors for what concerns the agreements' score and the absence of a correlation between the minimum wage and the score.¹⁷ Looking deeply at the determinants of these differences could be object of future research.

Figure 23 National collective bargaining agreements by ranking (number)



Figure 24 Ranking and minimum wages by macro-sectoral group



¹⁷ The same analysis has been performed excluding from the ranking the dummy on the high minimum wage, without however making any appreciable difference.

3. Early adoptions of telework practices: what can we learn for the post Covid agenda?

Formally theorised in the 1970s as a solution to pollution in large urban centres (Nilles, 1975) and made possible thanks to ICT technologies, telework is today at the centre of debates within and outside the workplace. First of all, telework can be defined as an organisational practice whereby an employee carries out his or her job activities outside the company's formal perimeter through the use of ICT. It can be distinguished as home-based, remote or mobile, depending on whether the work is carried out at the employee's home, at external places or without a fixed location. Looking back over the last few decades, we observe that its diffusion has been slow and very gradual in most advanced economies (Eurofound, 2010). For what concerns Italy, we know that in 2019 only 4% of workers worked from home. However, the outbreak of the Covid-19 pandemic caused a radical change, forcibly removing the bottlenecks (of managerial, logistical-organisational and cultural nature) that were hindering its usage, since national governments around the world imposed, where possible, the adoption of telework practices both in public and private sectors in order to reduce the risk of contagion and allow economic activities to go on.

According to the Observatory on Smart Working of Milano Polytechnic, in Italy during the first lockdown (spring 2020) about 6.5 million people, approximately the 30% of the entire employed workforce worked from home (consistently with Cetrulo et al. (2020a)'s estimations). At the world level, the OECD estimated that two out of five workers worked from home during that period (OECD, 2020). From a regulatory point of view, such a widespread and rapid diffusion of teleworking, was possible thanks to the introduction of a simplified procedure that allowed its adoption without prior agreements between the parties involved, on the grounds of an emergency situation.

About a year after the start of the pandemic, many organisations continue to carry out a large part of their activities by the means of teleworking. Yet, despite the massive diffusion of this practice, it is still difficult to assess in depth its impact on the workers involved. In a quite unpredictable course of events, regulatory uncertainty is a serious concern for trade unions. In order to tackle the undergoing changes, the social partners have been engaged since spring 2020 in intense discussions on teleworking and safety protocols within companies. In this sense, the growing number of specific agreements related to the pandemic mainly signed at firm level can be interpreted as a confirmation of a certain dynamism and proactivity in those workplaces where collective bargaining is at stage. However, the definition of precise rules on organisational practices like telework, that can affect up to 30% of the Italian workforce, requires broader regulation at the national level in order to guarantee the same rights to all workers, regardless the quality of companies' industrial relations.

What is then the degree of diffusion of telework clauses within NCBAs? The aim of this chapter is to provide some references on the regulatory framework for remote working, then to explore the clauses within the Italian database of NCBAs. We believe this investigation can contribute to understand which are the most problematic issues on telework that might need further regulation.

¹⁸ In this report, we will refer alternatively to remote working, telework and working from home without making strong distinctions. For a comprehensive analysis of the evolution of working from home, see the last report of ILO (2021).

3.1 From European regulations to the law decrees during the pandemic

Telework was regulated in Italy for the first time in 1999 with respect to the public administration, then in 2000 a framework agreement on the adoption of telework within the public administration was signed by the national trade unions and ARAN¹⁹. It was defined as a form of remote working carried out by means of computer equipment and telephone connections in a place other than the official workplace and for the same wage.

However, it was not until 2004 that a wider definition covering the private sector in particular was drawn up with the Inter-Confederal Agreement between the main Italian employers' organisations and trade unions confederations. The agreement transposed entirely the first European Framework Agreement (EFA) on Telework signed on the 16th of July 2002 by the European social partners. However in several European countries telework had already been regulated well before 2002 albeit in a non-systematic way, and several companies and sectors had been the object of investigation in the late 1990s (Bibby 1996; Huws, 1999).

In this context, the EFA (and, consequently, the 2004 Inter-Confederal Agreement in Italy) systematised and outlined the main features of telework, focusing on 10 points that we can briefly summarise:

- 1) **Definition of telework** as a form of (subordinate) work organisation in which the work is performed outside the company with the help of ICT;
- 2) The **voluntary nature of the adoption of this practice** by both the employer and the employee and the need for an **agreement** between the parties;
- 3) **Equal working conditions and rights** of the teleworker with respect to those workers employed on similar tasks within the company;
- 4) Responsibility of the employer with regard to the **protection of data** used for professional purposes and compliance by the worker with the rules and restrictions set out by the employer;
- 5) **Respect for the worker's privacy** and the employer's obligation to inform the worker of the installation of monitoring tools, which must in any case be proportional to the goal pursued;
- 6) Responsibility of the employer for the supply, installation and maintenance of the **necessary** equipment for the performance of telework;
- 7) Guaranteed protection of teleworkers' **health and safety**, possibility for the employer and the trade union to access the workplace and carry out inspections (with prior consent from the worker if at his home) to verify compliance with the corresponding regulations;
- 8) **Flexible and autonomous management of working hours** by the worker, ensuring however workloads comparable to that of those who perform the same tasks within the company and attention to **preventing the risk of isolation** through the organisation of regular meetings between colleagues.
- 9) **Equal right of training and career development** with respect to non-teleworkers. Provision of specific training on ICT tools.
- 10) **Equal collective rights** and equal conditions of participation and eligibility for the offices of trade union representatives.

¹⁹ ARAN stands for "Agency for the Bargaining Representation of Public Administrations".

In addition to these clauses defined at the European level, the normative framework in Italy has been enriched by a number of national laws, although these were not exclusively related to telework.

The first and most important reference is certainly represented by the Law on Safety at Work promulgated in 2008. It states that all employees performing remote work by means of ICT for a continuous amount of time are subject to the clauses applied to video-terminals workers, with respect to the ergonomic requirement of the workplace, the right to make frequent pauses and being subject to medical controls especially concerning eyes and muscular disorders.

Another fundamental source is the Workers' Statute (Law n.30/1970) and its article 4 on the usage of audio-visual technologies that can potentially control and surveil workers while they perform their tasks. The original article was prohibiting the use of such technologies in absolute terms. However with the amendment contained in the Jobs Act Law in 2015, the possibility of using these tools has been admitted for organisational, production and safety purpose if trade unions agree on its usage. The Statute also claims that workers have to be informed regarding the use of the collected data. Moreover, since the issue of "digital" control also concerns the private sphere, the Privacy Guarantor itself, as well as the European Union through the GDPR (General Data Protection Regulation) of 2016, have reaffirmed the right to privacy of workers. How to combine privacy rights of workers and massive usage of softwares embodying high surveillance potential is certainly a difficult issue that will be crucial in following years (Zuboff, 2019).

Another legislative provision that concerns teleworkers (and home workers in general) relates to the definition of working time and, in particular, to the alleged impossibility of applying rules on the maximum duration of working time, overtime, night work and daily rest since the working day of a teleworker cannot be "measured" or "predetermined" due to its inherent characteristics (Law No. 66/2003, art.17, c.5).

More recently in 2017, the concept of "smart working" was introduced by law. Compared to telework, that is defined as a work activity performed outside the company with the use of ICT tools, smart working is described as a form of flexible work without constraints of place and time, whose purpose is on the one hand to increase companies' competitiveness and, on the other hand, to encourage a better work-life balance. In this respect, priority access to smart working is given to female workers immediately after maternity leaves, to parents with children with disabilities or disabled workers. The law also recognises the right of smart workers to be paid no less than "the overall wage applied", an issue that on the contrary is not explicitly addressed by the EFA. As well as for telework, a detailed agreement between the parties is required for the adoption of smart working. Moreover, protection against accidents at work and occupational diseases is guaranteed to the workers. Regarding working hours, it is made clear that the working hours must not exceed the daily or weekly maximum defined by law and by collective bargaining.

Starting in spring 2020, several regulatory interventions by the government were focusing on telework/smart working²⁰, with the aim of facilitating its adoption through the introduction of a simplified procedure that removed temporarily the obligation for the parties involved to sign an agreement and to express their voluntariness. Clearly, the Covid-19 pandemic has dramatically accelerated the adoption of remote working, but this acceleration has not been followed by an equal effort to regulate its implementation in details.²¹

²⁰ Despite the public discussion seems to be focused almost exclusively on the concept of "smart working", the actual experience of working from home due to the pandemic emergence is not endowed with the flexibility and autonomy that should characterise this "lean" model of remote working.

²¹ For investigation on telework and job quality, see Fana et al. (2020).

It is therefore useful to look back at existing collective bargaining, assess the extent to which these practices have been adopted to regulate remote working and eventually identify any best practice characterised by a greater and more comprehensive regulation. In the next section, we refer to the ten points listed in the EFA and we look at how they have been discussed in NCBAs exhibiting specific clauses on telework and/or smart work. As already said in the introduction, despite its limited size with respect to the total number of CBAs currently under validity in Italy, the sample of collective agreements under study covers about 40% of employees in the private sector and can therefore offer interesting insights on the degree of diffusion of these organisation modes.

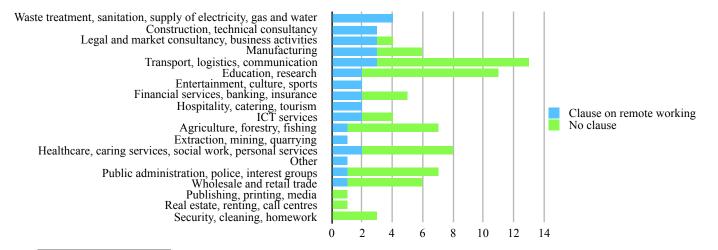
3.2. Collective bargaining on telework: between low diffusion and good practices

About one-third of the NCBAs show clauses on telework and/or smart working, as shown in **Figure 24**. Of these 32 contracts, 20 exclusively discuss telework, 9 discuss both telework and smart working, and 3 exclusively deal with smart work. However, if we consider renewals that have taken place in recent years for six agreements in our sample, we observe that four of those NCBAs that initially were regulating telework only, have introduced new clauses on smart work.²² In terms of sectors (**Figure 25**) we see that the majority of clauses on remote working are recorded in the waste treatment, gas, water and electrify supply, construction, manufacturing, legal and market consultancy activities. This is consistent with the macro sectoral groups distribution shown in **Figure 26**.

Figure 25 National collective bargaining agreements by clauses on remote working (%)

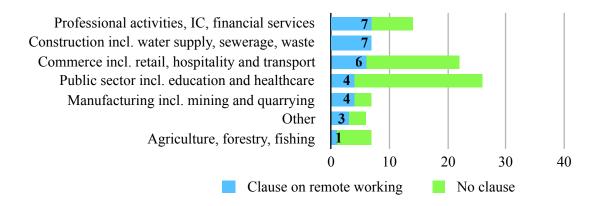


Figure 26 Sectors by clauses on remote working (number)



²²It is the case of railway, credit and financial companies and cooperative on spectacle and culture.

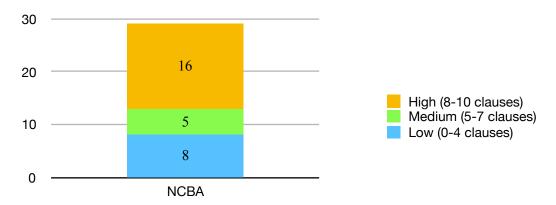
Figure 27 Macro sectoral groups by clauses on remote working (number)



Most clauses on smart working simply consist in the explicit commitment of trade unions and employers to discuss about it in the future. Only three agreements provide more detailed information. This certainly reflects a gradual transposition and low diffusion of this practice, whose introduction into the legislative framework is more recent than the one on teleworking.

As far as teleworking is concerned, interesting differences emerge. If we distinguish three levels of description (low, medium, high) depending on the characterisation of the EFA's 10 points within each agreement, we observe that in most cases telework is discussed in depth, with precise and extended reference to the points of the EFA (21 contracts out of 29 exhibit a medium and/or high level of detail).

Figure 28 Degree of details of clauses on telework in the selected collective bargaining agreements



This assessment, although mainly quantitative (we calculated the occurrence of the 10 points in each NCBA after reading each of them) helps us to both identify a number of good practices and also pinpoint some of the most problematic issues. What are then the most important aspects related to teleworking?

One of the first issues certainly concerns the coverage of costs related to the purchase of equipment and tools needed to carry out remote work. The employer undertakes to bear the costs of installation, management and maintenance of the equipment and he is committed to intervene rapidly to resolve any technical dysfunctions. Some NCBAs also mention the provision of chairs suited to workers' ergonomic needs and the coverage of costs related to telephone and internet broadband.

Linked to the workstation, the need to ensure adequate working conditions in terms of health and safety is clearly stated in many agreements. However, only few of them explicitly provide for an assessment before installing the workstation in order to check its adequacy. In fact, suitability of spaces should be certified through an official document signed by competent authorities and periodic inspections could be carried out to verify the conditions of the workplace.

However, assessing the suitability and healthiness of private workstations becomes a delicate issue, since in most cases carrying out these inspections means entering private and personal spaces of workers. If on the one hand individual privacy should be guaranteed, on the other hand compliance with health and safety rules should be ascertained for the benefit of the worker himself and his family. Interestingly, some NCBAs take into account the presence of other people and provide for payment of an insurance to cover injuries not only for the worker but also for family members in case of damage caused by the use of the technological equipments at home.

Another highly debated issue in the agreements under analysis concerns the exercise of power and control by the employer over teleworkers. The usage of softwares collecting data on workers' activities poses problems regarding the scope of surveillance systems, the respect for privacy and the level of awareness of workers. Some agreements explicitly refer to the need of exchange and dialogue between trade unions and employers, aimed at creating a system of active monitoring on data collection. The issue of control is inevitably linked to the necessity of introducing new evaluation criteria for remote workers that are not subject to managers' control. Indeed, this organisational change, fostered by the pandemic, could in principle push companies to define differently their paradigm of work organisation, moving from tight control and discipline to reciprocal trust, workers' increasing autonomy and active involvement. But the diffusion, especially in United States, of new digital tools that can ensure a pervasive and continuous control over workers' activities prefigures a different trend.²³

A further provision usually cited in the agreements concerns the need to guarantee professional updating for those who are re-employed in the workplace after a long period of remote working, even if further details on training packages are not supplied.

Apart from these aspects, several topics are not sufficiently addressed within agreements, despite their importance.

One of these regards the psychological risks for workers. A prolonged isolation and deprivation from social interaction with colleagues can cause serious health problems. In this sense, periodic physical meetings or training courses at the company's offices could be scheduled during the teleworking period. The risk of isolation also entails the potential weakening of trade unions' strength at company level, since the perception of work as a private experience can hinder communication, solidarity and organisation among peers, as historically shown for home workers (see for instance Toffanin, 2016).

Another fundamental issue concerns the definition of the working time. As we have seen, allowances for overtime are not granted to teleworkers given the alleged flexibility of working time, whereas the law on the smart working sets limits to the maximum amount of daily and weekly hours of work. However, ensuring compliance with this constraint is actually very difficult. Empirical studies confirm that remote workers tend to work more than workers on site (ILO and Eurofound, 2017). This implies a potential increase in unpaid work. A massive diffusion of telework as the one recorded nowadays, makes it necessary to analyse the issue of working time and establish

²³Softwares such as Time Doctor allow managers to monitor the time spent by workers on social media, the number of e-mails read or even to take screen shots or webcam photos to ascertain that the worker is at his/her workstation during the working day.

a right to disconnection, for instance providing the disablement of company devices after ordinary working hours (as foreseen for example in France).²⁴

Finally, it is important to dwell on one last point. Teleworking and, to an even greater extent, smart working are usually described as means of ensuring a better work-life balance, thanks to a flexible time management and the possibility of reducing commuting travels. Consequently, women are very often seen as the natural recipients of such practices, which should facilitate, in theory, the conciliation of domestic and productive work. However, interpreting telework as a solution to the unequal distribution of the domestic burden between the two sexes and, more generally, assuming that working from home can promote better reconciliation and increased well-being is based on two controversial assumptions. The first is that the level of autonomy of the worker in carrying out his or her work is sufficiently high to allow him or her a truly flexible management of time and objectives.²⁵ The second is that home, where the majority of teleworkers perform their job, represents a neutral space where it is possible to separate productive activities from unpaid care work. Clearly, in a context characterised by strong gender inequality for what concerns distribution of housework and care activities (ILO, 2018), telework is unlikely to allow a 'liberation from work' and will rather represent a compression of multiple jobs within a single space and a dilated time (Cetrulo and Virgillito, 2020).²⁶ The picture gets even worse if we consider the numerous episodes of domestic violence that could increase, as recorded during this year in Italy, in the case of a more assiduous presence at home of both spouses (generating a recurrence of the so called "weekend syndrome").

To conclude, it is evident that the inclusion of telework and/or smart working within collective bargaining agreements before the pandemic was far from being homogenous and was relatively limited. Moreover, even among those agreements deeply discussing remote working, several controversial issues are not formally discussed. At European level, a notable exception is the recent European Framework Agreement on Digitalisation signed in 2020 by the European social partners. The EFA addresses the issues of: *i)* digital skills and securing employment; *ii)* modalities of connecting and disconnecting; *iii)* artificial intelligence and guaranteeing the human in control principle; *iv)* respect of human dignity and surveillance. This confirms the need of introducing clear normative measures at the national level.

Meanwhile, active monitoring and confrontation among social partners should be promoted within companies and sectors, devoting particular attention to professional segregation, unpaid overtime and fair pay, invasive forms of control, health and safety protection and equal opportunities for female workers.

²⁴ For further information, consult https://www.eurofound.europa.eu/observatories/eurwork/industrial-relations-dictionary/right-to-disconnect.

²⁵ About the main characteristics of the Italian occupation structure, see Cetrulo et al. (2020b) and ISTAT (2020).

²⁶ Italian women devote, on an average weekly day, about 5 hours to unpaid work compared to 2 hours for men (ISTAT, 2019, reference year 2014).

Conclusions

Sectoral collective agreements are one of the main pillars of industrial relations in Italy. Studying their content is fundamental to understand the conditions under which workers in a given sector perform their work and how they are remunerated. The process of selection, collection and annotation of the Italian NCBAs performed by the Cnel for the Colbar project allows deepening the knowledge and understanding of collective bargaining related issues in Italy, offering room for both comprehensive comparison and specific analysis on selected topics. The report is organised in three main sections.

First, we have presented the Italian database composed by 89 collective agreements. The agreements provide a sufficient degree of sectoral heterogeneity (18 sectors are included), they are in the majority of cases still in force (agreements have been signed between 2010 and 2020, but mostly around 2016) and the private subset of NCBAs roughly concerns 40% of the entire private workforce. Thus, looking at their contents implies assessing the working conditions of a relevant number of workers and offers a relatively representative picture of the private sector.

Secondly, the analysis has been focused on wage setting and remote working, two topics that for different reasons are currently at the centre of the political debate.

From one hand, income inequality, wage stagnation and productivity slowdown are usually listed as crucial problems for the Italian economy. At the same time, the absence of a formal extension mechanism of wage floors defined by sectoral agreements, the increasing fragmentation of social partners' organisations and the emergence of pirate agreements is pushing policy makers to discuss about a statutory minimum wage, while preserving the role of collective bargaining. Besides, the introduction of a legal minimum wage would also be in line with the EU Directive (2020) that calls for a common framework on minimum wages in Europe.²⁷

It is therefore interesting to look at how wages are determined in concrete terms within NCBAs, studying in particular differences between the bottom and top job levels, the amount and incidence of pay rise, seniority allowances and additional monthly payments.

On the other hand, remote working represents nowadays a topical subject, since its adoption has been massively encouraged (if not literally imposed) in all firms around the world in order to tackle the emergence caused by the Covid-19 pandemic. For this reason, an investigation on both the degree of diffusion and comprehensiveness of NCBAs' clauses on remote working before the explosion of the pandemic can be useful for: *i)* understanding the main issues at stake on which social partners should focus their attention; *ii)* identifying best practices and consequently discuss about the regulation needed in order to guarantee fair conditions for remote workers with respect to the workers at the office.

Results show that remote working is regulated only in 30% of our sample, but in the majority of cases the clauses are quite extensive. Among the most controversial issues that require further regulation, there are certainly the payment of overtime work, the provision of adequate equipment and training, the guarantee of health and safety protection and the limitation of surveillance systems over workers.

To conclude, as shown in this report, studying the content of national collective bargaining agreements can be useful not only for trade unions and employers, but also for policy makers since

²⁷ Directive of the European Parliament and of the Council on adequate minimum wages in the European Union available at https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52020PC0682&from=EN

it provides detailed information from official sources on the scope and intensity of industrial relations. Moreover the availability of standardised data, thanks to the complex and accurate work of annotation based on the Wage Indicator's codebook (Ceccon and Medas, 2021), is promising for what concerns the development of comparative studies across sectors and countries. Interdisciplinary methods can be fruitfully applied in these kind of studies, for instance combining expert analysis and automatic text analysis.²⁸

²⁸ For an example of text analysis applied to collective bargaining agreements, see Russo et al. (2019).

References

Baccaro, L., and Howell, C. (2017) *Trajectories of neoliberal transformation: European industrial relations since the 1970s*. Cambridge University Press.

Besamusca J., Kahancová M. and Tijdens, K. (2018) Contents of Collective BargainingAgreements in the Commerce Sector. REPORT 1 of the BARCOM project. Amsterdam etc.: University of Amsterdam-AIAS/CELSI/EUBA/EuroCommerce/Uni Global Union/ Wage Indicator.

Biagiotti, M., Tomaro, S. and Venturi L. (2021) Capitolo 10 Un progetto per il nuovo archivio della contrattazione collettiva in Cnel (2021) XXII Rapporto del Cnel. Mercato del lavoro e contrattazione collettiva.

Bibby A. (1996) *Trade unions and telework*, Technical Report http://www.andrewbibby.com/docs/textonly.pdf last visit 10/01/2020.

Carrieri, M., M.C. Ambra and Ciarini, A. (2018) The 'resistible' rise of decentralised bargaining: a cross-country and inter-sectoral comparison in Leonardi and Pedersini (eds.) *Multi-employer bargaining under pressure: decentralisation trends in five European countries*, ETUI.

Ceccon, D., Medas, G. (2021). Codebook Wage Indicator Collective Agreements Database – Version 4 – January 2021. *WageIndicator Foundation*, Amsterdam.

Cetrulo, A., Cirillo, V., and Guarascio, D. (2019). Weaker jobs, weaker innovation. Exploring the effects of temporary employment on new products. *Applied Economics*, 51(59), 6350-6375.

Cetrulo, A., Guarascio, D., and Virgillito, M. E. (2020a). Working from home and the explosion of enduring divides: income, employment and safety risks (No. 2020/38). Laboratory of Economics and Management (LEM), Sant'Anna School of Advanced Studies, Pisa, Italy.

Cetrulo, A., Guarascio, D., and Virgillito, M. E. (2020b). Anatomy of the Italian occupational structure: distributed knowledge and concentrated power, *Industrial and Corporate Change*, https://doi.org/10.1093/icc/dtaa050.

Cetrulo, A., and Virgillito, M.E. (2020) Dicotomie di genere: tra lavoro da casa e lavoro di cura in Cigna, L. (a cura di) *Forza Lavoro! Ripensare il lavoro al tempo della pandemia*, Quaderni/37 Fondazione Giangiacomo Feltrinelli, Milano.

D'Amuri, F., and Nizzi, R. (2018). Recent developments of Italy's industrial relations system. *E-Journal of International and Comparative Labour Studies*, 7(2).

Eurofound (2010) *Telework in the European Union*, Technical Report available online https://www.eurofound.europa.eu/sites/default/files/ef_files/docs/eiro/tn0910050s/tn0910050s.pdf last visit 10/01/2021.

Eurofound and the International Labour Office (2017), *Working anytime, anywhere: The effects on the world of work*, Publications Office of the European Union, Luxembourg, and the International Labour Office, Geneva. http://eurofound.link/ef1658 last visit 10/01/2021.

European Commission (2020) Proposal for a directive of the European Parliament and of the Council on adequate minimum wages in the European Union, https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX: 52020PC0682&from=EN.

Fana, M., Milasi, S., Napierala, J., Fernandez-Macias, E., & Vazquez, I. G. (2020). *Telework, work organisation and job quality during the COVID-19 crisis: a qualitative study* (No. 2020-11). Joint Research Centre (Seville site).

Garnero, A. (2018). The dog that barks doesn't bite: coverage and compliance of sectoral minimum wages in Italy. *IZA Journal of Labor Policy*, 7(1), 1-24.

Garnero, A. (2020). The impact of collective bargaining on employment and wage inequality: Evidence from a new taxonomy of bargaining systems. *European Journal of Industrial Relations*, 0959680120920771.

Garnero, A., and Lucifora, C. (2020). Turning a blind eye? Compliance to minimum wages and employment (No. 85). Working Paper.

Huws, U., Jagger, N., and O'Regan, S. (1999). Teleworking and globalisation. Institute for Emploment Studies.

ILO (2018) Care work and care jobs for the future of decent work. International Labour Office - Geneva.

ILO (2021) Working from home: From invisibility to decent work, International Labour Office, Geneva ILO, 2021.

Istat (2019) *I tempi della vita quotidiana. Lavoro, conciliazione, parità di genee e benessere soggettivo*, Temi Letture Statistiche Istat, https://www.istat.it/it/files/2019/05/ebook-I-tempi-della-vita-quotidiana.pdf last visit 10/01/2021.

Istat~(2020)~L'organizzazione~del~lavoro~in~Italia:~orari,~luoghi,~grado~di~autonomia.~Anno~2019~,~Technical~Report~https://www.istat.it/it/files//2020/09/Report-organizzazione-lavoro-Istat-Eurostat-29-09-2020.pdf?~fbclid=IwAR1xbeBslmNfSu-L3htTF65-2XEwGs992PKUhrnvEj7xq9nYt6nASwWlZ-g~last~visit~10/10/2021.

Jaumotte, F., and Osorio Buitron, C. (2020). Inequality: traditional drivers and the role of union power. Oxford Economic Papers, 72(1), 25-58.

Kleinknecht, A. (2020). The (negative) impact of supply-side labour market reforms on productivity: an overview of the evidence. *Cambridge Journal of Economics*, 44(2), 445-464.

Leonardi, S.; Munno, A.R.; Spiller, S.; Pata, I.; Morleo, G.; Passarello, G.; Baldazzi, P.; Massimiano, E.; De Carli, M.; Gatto, B.; Cianchi, V. and Falcioni, F. (2021) Contrattazione decentrata in tempo di COVID-19 in Cnel (2021) XXII Rapporto del Cnel. Mercato del lavoro e contrattazione collettiva.

Leonardi, S., and Pedersini, R. (2018). Multi-employer bargaining under pressure: decentralisation trends in five European countries. ETUI.

Lucifora, C., and Vigani, D. (2020). Losing control? Unions' representativeness," pirate" collective agreements and wages (No. 87). Working Paper.

Magda, I., Marsden, D., and Moriconi, S. (2012). Collective agreements, wages, and firms' cohorts: Evidence from Central Europe. *ILR Review*, 65(3), 607-629.

Nilles, J. (1975). Telecommunications and organizational decentralization. IEEE Transactions on Communications 23(10), 1142–1147.

OECD (2019), Negotiating Our Way Up: Collective Bargaining in a Changing World of Work, OECD Publishing, Paris, https://doi.org/10.1787/1fd2da34-en.

OECD (2020) OECD Employment Outlook 2020: Worker Security and the COVID-19 Crisis, OECD Publishing, Paris.

Picot, G., and Tassinari, A. (2017). All of one kind? Labour market reforms under austerity in Italy and Spain. *Socio-Economic Review*, 15(2), 461-482.

Pulignano, V., Carrieri, D., and Baccaro, L. (2018). Industrial relations in Italy in the twenty-first century. *Employee Relations*.

Russo, M., Pavone, P., and Cetrulo, A. (2019). Conflict and Participation in Bargaining at Company Level: The Lamborghini Case. *Economia & lavoro*, 53(1), 53-74.

Stansbury, A., and Summers, L. H. (2020). The declining worker power hypothesis: An explanation for the recent evolution of the American economy (No. w27193). National Bureau of Economic Research.

Toffanin, T. (2016) Fabbriche invisibili. Storie di donne, lavoranti a domicilio, Ombre corte.

Treu, T. (2019). La questione salariale: legislazione sui minimi e contrattazione collettiva. *Diritto delle relazioni industriali: rivista della Associazione lavoro e riceche*, 29(3), 767-809.

Zuboff, Shoshana (2019). The age of surveillance capitalism: The fight for a human future at the new frontier of power. Profile book.

Appendix

Table 2 Macro sectoral groups and corresponding number of agreements at 2-digit sectors

| Macro Groups | Sector | N | Sector | N | Sector | N | Sector | N | Tot |
|--|---|----|--|----|--|---|--|---|-----|
| Agriculture, forestry, fishing | Agriculture, forestry, fishing | 7 | | | | | | | 7 |
| Manufacturing incl. mining and quarrying | Manufacturing | 6 | Extraction, mining, quarrying | 1 | | | | | 7 |
| Construction incl. water supply, sewerage, waste | Construction, technical consultancy | 3 | Waste treatment, sanitation, supply of electricity, gas and water | 4 | | | | | 7 |
| Commerce incl. retail, hospitality and transport | Wholesale and retail trade | 6 | Transport, logistics, communication | 13 | Hospitality, catering, tourism | 2 | Real estate, renting, call centres | 1 | 22 |
| Public sector, education and healthcare | Education, research | 11 | Public administration, police, interest groups | 7 | Healthcare, caring services, social work, personal services | 8 | | | 26 |
| Professional activities, information & communication, financial services | Legal and market consultancy, business activities | 4 | Financial services, banking, insurance | 5 | ICT services | 4 | Publishing, printing, media | 1 | 14 |
| Other | Entertainment, culture, sports | 2 | Security, cleaning, homework | 3 | Other | 1 | | | 6 |

Table 3 List of national collective bargaining agreements: title, sector and clause on telework/smart working

| Title of the agreement | Sector | Clause on remote working | |
|--|---|----------------------------|--|
| ccnl per gli addetti imbarcati su natanti esercenti la pesca marittima 2018-2021 | Agriculture, forestry, fishing | | |
| ccnl per gli operai agricoli e florovivaisti 2018-2021 | Agriculture, forestry, fishing | | |
| ccnl quadri e impiegati agricoli 2016-2019 | Agriculture, forestry, fishing | | |
| ccnl lavoratori dipendenti imprese attività agromeccaniche 2018-2020 | Agriculture, forestry, fishing | | |
| ccnl dipendenti cooperative e consorzi agricoli 2016-2019 | Agriculture, forestry, fishing | | |
| ccnl dipendenti dai consorzi di bonifica e di miglioramento fondiario 2015-2018 | Agriculture, forestry, fishing | Telework | |
| ccnl imbarcati sui natanti di cooperative di pesca 2017-2020 | Agriculture, forestry, fishing | | |
| ccnl dipendenti da aziende dei settori pubblici esercizi ristorazione collettiva e commerciale e turismo 2018-2021 | Hospitality, catering, tourism | Telework | |
| ccnl per i dipendenti delle imprese di viaggi e turismo 2019-2020 | Hospitality, catering, tourism | Telework and smart working | |
| ccnl dipendenti da proprietari di fabbricati 2013-2014 | Real estate, renting, call centres | | |
| ccnl ormeggiatori e barcaioli dei porti italiani 2016-2019 | Transport, logistics, communication | | |
| ccnl lavoratori dei porti 2016-2018 | Transport, logistics, communication | | |
| conl lavoratori cooperative esercenti attività settore taxiradio taxi e settori strumentali e collaterali al trasporto pubblico locale non di linea 2015-2019 | Transport, logistics, communication | | |
| ccnl trasporto aereo vettori aerei stranieri personale di terra 2014-2016 | Transport, logistics, communication | | |
| ccnl parte generale trasporto aereo 2019 | Transport, logistics, communication | Telework and smart working | |
| ccnl trasporto aereo parte specifica vettori 2014-2016 | Transport, logistics, communication | | |
| ccnl trasporto aereo sezione handlers 2015 | Transport, logistics, communication | | |
| ccnl per il personale dipendente da società e consorzi concessionari di autostrade e trafori 2016 | Transport, logistics, communication | Telework | |
| ccnl trasporto aereo parte specifica catering aereo 2014-2016 | Transport, logistics, communication | | |
| ccnl dipendenti imprese artigiane di noleggio autobus con conducente e relative attività correlate 2019-2020 | Transport, logistics, communication | Telework | |
| cnnl personale dipendente agenzie marittime e raccomandatarie e mediatori marittimi 2018-2020 | Transport, logistics, communication | | |
| ccnl addetti degli impianti di trasporto a fune 2019-2022 | Transport, logistics, communication | | |
| ccnl logistica trasporto merci e spedizione 2013-2015 | Transport, logistics, | | |
| ccnl per i dipendenti da aziende del terziario della distribuzione e dei servizi 2015-2019 | communication Wholesale and retail trade | Telework | |
| ccnl aziende esercenti lavorazione commercio trasporto esportazione e importazione all'ingrosso di fiori freschi recisi verde e piante ornamentali per imprese commerciali consortili o cooperative e G.E.I.E. 2016-2018 | Wholesale and retail trade | Telework | |
| ccnl rapporti di agenzia e rappresentanza commerciale comparto artigiano 2015-2017 | Wholesale and retail trade | | |
| ccnl dipendenti imprese gestite e partecipate da enti localiesercenti farmacie parafarmacie magazzini all'ingrosso e laboratori 2013-2015 | Wholesale and retail trade | | |
| ccnl agenzie di somministrazione di lavoro 2019-2021 | Wholesale and retail trade | | |
| ccnl cooperative di consumo per dipendenti da imprese della distribuzione cooperativa 2011-2013 | Wholesale and retail trade | | |
| ccnl dipendenti delle aziende società ed enti pubblici economici aderenti a federcasa 2016-2018 | Construction, technical consultancy | Telework | |
| ccnl ANAS 2016-2018 | Construction, technical consultancy | Telework | |
| ccnl del personale delle fabbricerie aderenti A.F.I 2018-2020 | Construction, technical consultancy | Smart Working | |
| ccnl dipendenti di imprese e società esercenti servizi ambientali 2016-2019 | Waste treatment, sanitation, supply of electricity, gas and water | Telework | |
| ccnl per i lavoratori addetti al servizio elettrico 2019-2021 | Waste treatment, sanitation, supply of electricity, gas and water | Telework and smart working | |

| ccnl settore gas e acqua 2016-2018 | Waste treatment, sanitation, supply of electricity, gas and water | Telework and smart working |
|---|---|----------------------------|
| ccnl servizi ambientali 2016-2019 | Waste treatment, sanitation, supply of electricity, gas and water | Telework and smart working |
| ccnl addetti all'industria dell'energia e del petrolio 2016-2018 | Extraction, mining, quarrying | Telework and smart working |
| ccnl area tessile moda chimica ceramica 2017-2018 | Manufacturing | Telework |
| ccnl settore piccola e media industria legno mobili arredamento sughero forestale 2013-2016 | Manufacturing | |
| conl dipendenti dalle aziende metalmeccaniche e della installazione di impianti 2016 2019 | Manufacturing | Smart Working |
| cenl industria della carta e cartone cellulosa pasta legno fibra vulcanizzata aziende | Manufacturing | Telework |
| cartotecniche e trasformatrici della carta 2017-2019 ccnl dipendenti aziende esercenti produzione cemento calce e suoi derivati gesso e | Manufacturing | |
| relativi manufatti 2016-2018 ccnl dipendenti aziende di lavorazione della foglia di tabacco secco allo stato sciolto | Manufacturing | |
| 2017-2020 | Financial services, banking | |
| ccnl impiegati amministrativi agenzie generali di generali Italia S.P.A 2018-2020 | insurance | |
| ccnl quadri direttivi e per il personale delle aree professionali dipendenti dalle imprese creditizie finanziarie e strumentali 2015-2018 | Financial services, banking insurance | Telework |
| ccnl personale non dirigente poste italiane | Financial services, banking insurance | Telework and smart working |
| ccnl dipendenti agenzie di assicurazione in gestione libera 2016-2020 | Financial services, banking insurance | |
| ccnl dirigenti dipendenti dalle imprese creditizie finanziarie e strumentali 2015-2018 | Financial services, banking insurance | |
| ccnl dipendenti aziende videofonografiche 2014-2016 | ICT services | Telework |
| ccnl per i dipendenti dell'industria cineaudiovisiva 2018-2021 | ICT services | |
| ccnl dipendenti imprese artigiane e delle piccole e medie imprese dell'area comunicazione 2016-2018 | ICT services | Telework |
| cenl dipendenti dagli esercizi cinematografici e cinema teatrali 2017-2019 | ICT services | |
| ccnl dipendenti degli studi professionali 2015-2018 | Legal and market consultancy, | Telework |
| ccnl consorzi ed enti di sviluppo industriale 2019-2021 | business activities Legal and market consultancy, | Telework and |
| cenl dirigenti dei consorzi ed enti di sviluppo industriali aderenti alla federazione | business activities Legal and market consultancy, | smart working |
| italiana consorzi e FICEI 2016-2018 | business activities Legal and market consultancy, | |
| ccnl quadri e impiegati aziende gruppo INVITALIA 2017-2019 | business activities | Telework |
| cenl testate periodiche di informazione locale no profit e online 2018-2020 | Publishing, printing, media | |
| ccnl personale fondazioni 2016-2018 | Education, research | Telework and smart working |
| accordo collettivo nazionale collaboratori università non statali 2015-2016 | Education, research | |
| accordo collettivo nazionale collaboratori enti di ricerca privati istituto di ricovero a carattere scientifico 2016 | Education, research | |
| ccnl personale dipendente dagli Istituti scolastico-educativi gestiti da enti ecclesiastici AGIDAE 2016-2018 | Education, research | |
| ccnl ANINSEI per il personale della scuola non statale 2015-2018 | Education, research | |
| ccnl personale area istruzione e ricerca dirigenti 2016-2018 | Education, research | |
| ccnl personale addetto ai servizi all'infanzia e alle scuole dell'infanzia non statali 2016-2018 | Education, research | |
| ccnl personale del comparto istruzione e ricerca 2016-2018 | Education, research | |
| ccnl personale comparto sanità sezione ricerca sanitaria e attività supporto alla ricerca 2016-2018 | Education, research | |
| ccnl personale dipendente da enti opere e istituti valdesi 2010-2012 | Education, research | Telework |
| ccnl università pontificie e facoltà ecclesiastiche 2017-2020 | Education, research | |
| ccnl artisti tecnici amministrativi e ausiliari dipendenti da società cooperative e imprese sociali produzione culturale e spettacolo 2015-2018 | Entertainment, culture, sports | Telework |
| ccnl personale non dirigente coni servizi spa e federazioni sportive nazionali 2015-2017 | Entertainment, culture, sports | Telework |
| accordo quadro associazione nazionale DOMUS e FelsaCISL 2018-2021 | Healthcare, caring services, social work, personal services | |
| ccnl personale dipendente croce rossa enti terzo settore volontariato fondazioni 2020-2022 | Healthcare, caring services, social work, personal services | |

| ccnl personale del comparto sanità 2016-2018 | Healthcare, caring services, social work, personal services | |
|--|---|---------------|
| ccnl personale anpas e realtà operanti ambito sociosanitario assistenziale educativo delle pubbliche assistenze 2017-2019 | Healthcare, caring services, social work, personal services | |
| ccnl area sanità dirigenti 2016-2018 | Healthcare, caring services, social work, personal services | |
| ccnl dipendenti delle misericordie e organizzazioni ambito sociosanitario assistenziale educativo 2010-2012 | Healthcare, caring services, social work, personal services | |
| ccnl personale dipendente settore assistenziale socio-sanitario e cure post intensive 2017-2019 | Healthcare, caring services, social work, personal services | Telework |
| ccnl dipendenti avis 2010-2012 | Healthcare, caring services, social work, personal services | |
| ccnl dipendenti degli istituti per il sostentamento del clero 2017-2019 | Other | Telework |
| ccnl dirigenti ENAV spa 2014-2016 | Public administration, police interest groups | |
| ccnl personale area funzioni centrali rinnovo 2020 | Public administration, police interest groups | |
| ccnl personale del comparto funzioni centrali 2016-2018 | Public administration, police interest groups | |
| ccnl personale del comparto funzioni locali 2016-2018 | Public administration, police interest groups | Smart Working |
| ccnl personale non direttivo e non dirigente del corpo nazionale dei vigili del fuoco 2016-2018 | Public administration, police interest groups | |
| ccnl personale impiegatizio e quadro agenzia demanio ente pubblico economico 2016- 2018 | Public administration, police interest groups | |
| ccnl dipendenti delle ambasciate consolati legazioni istituti culturali ed organismi Internazionali in Italia 2017-2019 | Public administration, police interest groups | |
| ccnl dipendenti da istituti e imprese di vigilanza privata e servizi fiduciari 2013-2015 | Security, cleaning, homework | |
| ccnl istituti e imprese vigilanza privata e servizi fiduciari assicurezza 2013-2015 | Security, cleaning, homework | |
| ccnl imprese esercenti servizi di pulizia e servizi integrati multiservizi 2010-2011 | Security, cleaning, homework | |