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The distribution of employees and wages in five sectors of activity: the Italian case

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Abstract

Considering the long stagnation of Italian wages, and taking into consideration the current inflation growth, in this report we highlight the role of the Italian wage setting model in the dynamic of both employment and wages considering also the sectoral heterogeneity characterising the Italian labor market. Indeed, wage-setting institutions are important for explaining the differences in economic performance and the provisions characterizing collective or decentralized wage bargaining can influence several economic variables. Italy is characterized by a two-tier industrial relations system where the sectoral collective bargaining covers about 90% of workers, while company-level bargaining affects only a minority of Italian firms. This kind of system can affect both on wages and employment. In the following pages, using the data on private-sector employees deriving from the *Istituto Nazionale di Statistica* (Istat), we will provide some important evidence.

Keywords: Collective bargaining, wages, employment, Italy, sector of activities

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BARWAGE

BARWAGE investigates the potential of collective bargaining as a tool for ensuring adequate minimum wages in the European Union. It explores the size of four wage-setting arenas across EU countries and industries: the national or peak level, sector-level collective bargaining, firm-level collective bargaining, and individual (non-collective) negotiations. BARWAGE uses microdata to identify what share of the workers are earning under 110% of the statutory minimum wage are covered by sectoral or enterprise collective bargaining. Using coded data of 900 CBAs from 9 EU countries, the presence and nature of pay scales in the sectoral and firm-level collective bargaining agreements (CBAs) are analyzed. To deepen the insight into the impact of collective wage bargaining, national level data will be used to detail the wage arenas in 2 EU countries (Netherlands and Italy). The project lasts 2 years (2022-2024) and includes 6 work packages.

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1. Introduction

In a very complex macroeconomic framework, influenced by exogenous shocks such as the health crisis due to the Covid-19 pandemic, the wage issue has taken on new importance in the Italian political and academic debate, not least because of the exacerbation of the phenomenon of working poor. Indeed, Italy is the only country in the OECD area where the average annual wage decreased (-2.9%) between 1990 and 2020; while in Germany it grew by 33.7% and in France by 31.1%. This is a composite trend: in the 1990s and 2000s, wages in Italy grew, albeit with a flat dynamic, by 0.7% and 5.2% respectively. However, in the last decade (2010-2020) annual average wages showed the most negative development, with a fall of -8.3%. Over the three decades, the gap between average wage growth in OECD countries and wage growth in Italy increased progressively from -14.6% (1990-2000), to -15.1% (2000-2010) and finally to -19.6% (2010-2020) (Inapp, 2022).

There may be a range of reasons for such a declining wage dynamic. In this report, which constitutes deliverable 5.3 of the BARWAGE project (European Union social dialogue grant 101052319), we highlight the role of labour market institutions and especially the Italian wage setting model. Indeed, wage-setting institutions are considered important for explaining the differences in economic performance among countries (Nickell, 1997) and the provisions characterizing collective or decentralized wage bargaining can potentially influence several economic variables (Fanfani, 2023).

2. Collective wage bargaining in Italy

As it is well known, wages in Italy are set by a centralised collective bargaining agreement (CBA) and it belongs - with Austria, Denmark, Sweden, and Finland – to the small group of EU Member States without a statutory minimum wage (as we explained below minimum wages are only defined within the terms of the collective agreement). Moreover, like in Denmark and Sweden only, there is no administrative extension mechanism to make the provisions binding beyond the signatory parties of the collective agreements. Despite that, article 36 of Italy's Constitution lays down that remuneration must always be "proportionate" to the quantity and quality of the work performed and, in any case, "sufficient" to guarantee workers and their families a free and dignified existence. From this perspective, Italy – historically short of a legal minimum wage – should apply a concept of "Constitutional (living) sufficient wage", which is not a mere programmatic achievement, but an immediately prescriptive norm for all the actors: private and public employers, workers of all kinds, and judges (Leonardi, 2024; Ponterio 2023).

As discussed by Leonardi (2024), in Italy, collective bargaining is an expression of the constitutional principle of trade union freedom. However, the provisions concerning unions' ability to stipulate binding industry-wide agreements, under the condition of registration, have never been implemented (article 39 of the Constitution). The collective bargaining system has developed along very different lines than those envisaged by the Constitution, which were essentially the free and mutual recognition of the collective bargaining parties according to the principles of civil law, but the established judicial practice of interpreting the constitutional principles of proportionality and sufficient pay "to conduct a dignified life for the workers and his family" (Article 36) with reference to collectively agreed wages as the benchmark, establishes a de facto extension mechanism. This ensures that all wage-earners tend to be covered, albeit indirectly, by a national industry-wide agreement.

Regarding collective bargaining levels and coordination, after the implementation of a settlement between the Government and the most representative social partners signed in July 1993 (the 23rd of July 1993 Protocol), a two-tier system was created: the first tier consists of sector/industry-level CBAs (*Contratti Collettivi Nazionali del Lavoro* - CCNL) that are set between most representative trade unions and employer organizations¹. The second tier consists of decentralised agreements at the firm (or territorial) level, where negotiations occur directly between employers and firm-level union delegations (Bavaro and Raitano, 2024; Dustmann et al. 2023).

The national collective bargaining agreements are responsible for setting minimum wages according to different job levels, which roughly correspond to different occupations (a typical contract distinguishes around eight job titles), protecting wage earners' purchasing power against inflation. The agreements should be renewed every three years (prior to 2009, wage levels were generally renegotiated every two years), but, in practice, they tend to last longer as renegotiations are only rarely completed on time, and the old terms of employment are ultra-active until a new agreement is signed (Garnero and Lucifora, 2022). Currently, there are more than one thousand sector-wide collective agreements that set pay scales for all private sector employees (a sector can be covered by more than one agreement because the activities defined and regulated by each collective agreement do not map to a standard sector classification.) (OECD 2019; D'Amuri and Nizzi 2017). All CBAs (including their texts and hence content) are recorded in the archives of the CNEL (National Council for Economics and Labor), along with contract details including their signatory parties. Industry-wide bargained minimum wages can be considered a functional equivalent of a statutory minimum wage if the share of workers covered is high (Garnero et al. 2015).

The second-level agreement is responsible for negotiating performance pay linked to productivity increases, quality, and other competitive elements. In practice, the wage effectively paid to a worker can thus be split into two components, the minimum wage negotiated in the sector level agreement, and a firm-level "cushion" (Dustmann et al. 2023). Decentralised bargaining is carried out at group or firm level, or alternatively at territorial level. The two levels – national and decentralised (firm or territorial) – are coordinated hierarchically, according to specialisation and not duplication.

2.1 Recent changes in the regulation of collective wage bargaining

In 2009 some important agreements were introduced in the bargaining system, recognizing a new centrality to the decentralized collective agreement². As explained by Gnesi et al. (2016), while these were agreed by the CISL and UIL confederations, they were not endorsed by CGIL, the largest of the three confederations. The most important changes introduced, compared with the system established by the 1993 Agreement, are:

- Industry agreements run for three years, covering both pay and conditions issues, rather than the two years for pay and four years for conditions, as set out in the 1993 framework.

¹ The term "representative" has been used to denote the employer association (Confindustria) and three unions (CGIL, CISL, UIL, also referred to as "union triad") that have long dominated the Italian industrial relations.

² On 22 January 2009, a Tripartite Agreement for the Reform of Collective Bargaining was signed by the Government and the social partners. However, CGIL did not participate due to its opposition to several clauses related to decentralisation and industrial unrest.

- Pay increases in industry agreements are no longer linked to the forecast inflation rate but to the forecast European consumer price index for Italy, excluding energy consumption. Any differences between the forecast and actual inflation should be made up for within the three-year period of the agreement. Productivity improvements are now only to be taken account of in company level bargaining, which the government is encouraging through tax incentives. Where there is no firm-level bargaining, employees should receive extra payments through a wage guarantee element (*“Elemento di Garanzia Retributive, EGR”*), to be agreed jointly by the two sides, and paid at the end of the three-year period.
- The negotiating timetable has been changed: the unions must submit their claim six months before the end of the agreement, and the employers must respond within 20 days; strikes are prohibited during the last six months of an agreement and in the month after it runs out.

Since 2009 there have been several, albeit limited, attempts to facilitate the second-level agreements. Particularly, the 2011 decree law (n.138, art.8) set conditions for firm-level and local wage agreements to derogate from the national collective agreement on specific matters. However, the legal standing of such conditions remains weak and restrictive (e.g., requiring a majority representation of trade unions for contract discussions at the firm level with restrictive or unclear criteria such as the aim to foster employment, increase in salary and competitiveness etc.). The rules on wage bargaining and the structure of contracts are set by social partners in framework agreements (rather than by law) (Kangur, 2018). Jin and Lenain (2015) report that the role of firm-level bargaining remains subject to fields specified within collective bargaining agreements and usually allowed for productivity-related incremental adjustments to collective terms. D’Amuri and Giorgiantonio (2015) shows a very small—12 percent of firms—and declining interest by firms to resort to the derogative principles of the 2011 law, owing to the prevailing legal uncertainty.

2.2 Centralized and de-centralized collective bargaining coverage

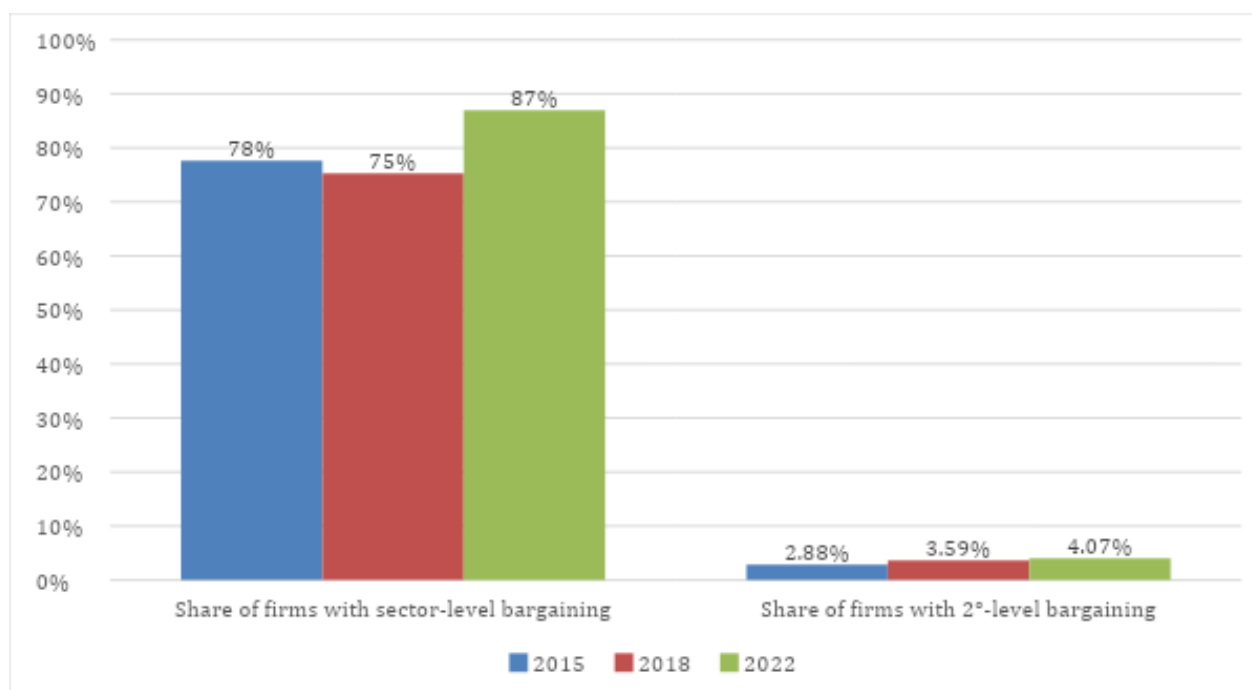
To deeply understand the effectiveness of the Italian two-tiers model, it could be useful to analyse the degree to which the two levels of bargaining are spread. The coverage of decentralised bargaining, where the productivity growth should be redistributed, is quite uncertain and depends on the type of used criteria. Some 20% of firms with at least 10 employees apply second-level collective bargaining agreements, covering 35% of workers. This coverage includes the public sectors and is concentrated in the medium-large unionised firms in the centre-north of Italy. If we include all kinds of firms, recent estimates suggest decentralized collective bargaining agreements cover a mere 10% of workers in a cross-sector average (Ministry of Labour, 2023). These estimates are even lower in all the sectors where low paid workers are concentrated. Decentralised bargaining is absent in agriculture, while only 4.85% of firms operating in the construction sector, 5% in trade and retail, 7.62% in health and social assistance, and 8.20% in transport and warehousing apply decentralized collective bargaining agreements.

The data from the *Rilevazione Imprese e Lavoro* (RIL) survey³, conducted by Inapp in 2015, 2018 and 2022 on a representative sample of partnership and limited liability firms operating in non-agricultural private sectors, suggests the firm-level bargaining shows a very low spread: in 2022 only a 4% of firms, with at least one employee, claims to apply this kind of collective bargaining agreement. If we look at the sectoral-level collective bargaining, the evidence is profoundly different. Across survey waves, sector level collective bargaining coverage is high and ranges from 75% to 87%. While coverage decreased from 78% to 75% between 2015 and 2018, it bounced back and increased 12 percentage points in 2022 (see figure 1).

The evidence reported in figure 1 also confirms that, even though the 1993 agreement aimed at favouring firm-level negotiations, national agreements remained the main instrument of regulation of employment conditions (Baccaro and Howell, 2017; Simoni, 2011). Moreover, as discussed by Leonardi et al. (2018), firm size matters: there is a strong and clear relationship between firm size and the propensity to engage in decentralized collective bargaining. The spread of firm-level agreements is much higher in large firms employing over 200 employees (60.5 per cent, 56.6 percent of which at firm level) or over 500 employees (69 per cent, with 65.5 percent at firm level). It is lower in the other size classes, namely between 50 and 199 workers, where 38.5 percent are covered, and between 10 and 49 employees, covering 17.5 per cent, split equally between company and territorial agreements. Wages are destined never to increase but merely to remain aligned, at best, with the real value they enjoyed when the system was established, in July 1993 (Tronti, 2016). Indeed, according to Tronti (2016), for most firms, the lack of second-level bargaining has resulted in non-compliance with the so-called 'golden rule of wages', which requires real wages to grow at the same rate as labour productivity.

³ The RIL survey sample, extracted from the ASIA archive - Statistical Register of Active Enterprises - of ISTAT, is stratified by size, sector, geographical area, and the legal form of firms. A subsample of firms is followed over time making the RIL dataset partially longitudinal over the period under study. The surveys collect a rich set of information about management and corporate governance, including the field of studies of the entrepreneur and family ownership, the workforce composition, the assets of the industrial relations, and a large set of other productive and competitive characteristics.

Figure 1. The share of firms signing first and second level agreements



Source: Author's elaborations on RIL-Inapp data 2015-2022

An additional factor that can limit the increase of collectively bargained wages is the adoption of new agreements with smaller or new unions that allowed for more flexibility in negotiating working conditions and wages, the so-called “pirate agreements”. This was possible since the country’s legal framework does not define hierarchical relationships between different CBAs in the private sector, nor does it provide criteria to assess the representativeness of unions (Dustmann et al. 2023). Lucifora and Vigani (2021) show that around two-thirds of the total number of collective bargaining agreements are pirate agreements, and that the rise of these pirate agreements was mainly driven by the intention to deviate from the economic and regulatory provisions of regular national collective agreements, signed by the main union confederations (CGIL, CISL and UIL) and the largest employers' associations (*Confindustria*, *Confapi*, *Confcommercio*, *Confesercenti*, CNA and few others) represented at CNEL. Finally, they find substantial wage penalties: the wage levels of workers covered by a “pirate collective” agreement are on average 15% lower compared with those of workers employed under a representative collective agreement (Lucifora and Vigani 2021).

The sub-optimal 'state of health' of the Italian collective bargaining clearly weighs in the debate on the hypothesis of introducing the legal minimum wage. The Italian system of wage determination is also under discussion in the light of the EU Directive 2022/2041 on adequate minimum wages in the European Union. In particular, the European initiative is viewed with disfavour by those countries in which the system of wage determination is left to the wage determination is entrusted to collective bargaining.

3. Employment and collective bargaining agreements

In this section, we show the employment dynamic of five different Italian economic sectors, that is manufacturing, constructions, wholesale and retail trade services, transportation and storage, and accommodation and food service activities. To this aim, we use the “Employment by activities and status (ALFS)” dataset, a subset of the Annual Labour Force Statistics (ALFS) database which contains annual labour force statistics for the 38 OECD member countries.

Figure 2 shows the number (thousand) of employees for each of the five selected sectors and for the entire service sector over the period 2008-2022. Following a common pattern among industrialized countries, the figure shows that the structure of the Italian economy has changed substantially over the last decades. As discussed by Iapadre (2011), the process of tertiarization was particularly rapid in the first half of the 1980s, but continued almost unabatedly in the following decades and was accelerated by the global financial crisis of 2008. Therefore, the economic importance of the manufacturing industry was visibly reduced. Despite the increase in the number of firms, aggregate employment levels have fallen in most sectors (Muscio and Scarpinato, 2007). Figure 2 confirms this result: from 2008 to 2022, the number of employees in the service sector is always higher than that in the manufacturing industry and construction.

When we separately analyse each sector, we observe that the accommodation and food services activities sector is the one with the lowest number of employees. In line with this evidence, Istat (2023) shows that this sector stood out also for the lowest number of hours worked (883, -36.8% from the mean) and paid (1,034, -38.7% below the mean)⁴. Regarding the industry, in 2022, in the construction sector were employed only 6% of the number of persons employed in Italy, while in the manufacturing were employed about 21%. The global economic crisis of 2008 profoundly affected the construction sector in Italy, continuing its influence over sector in the following decade. Indeed, between 2008 and 2018, the total number of employed people in this sector decreased from 1,925,500 to 1,406,800 (Cillo and Perocco, 2023).

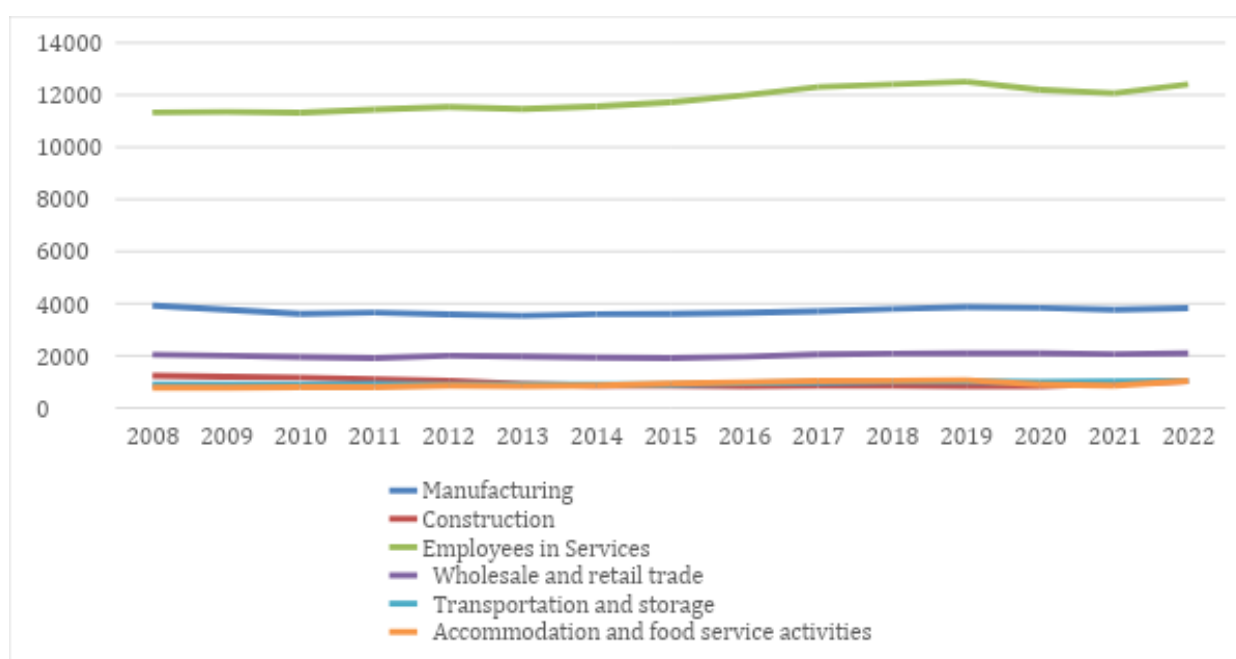
The crisis was further exacerbated by the 2020 pandemic, leading to a further decline in businesses and the number of people employed in the sector. Moreover, the negative employment effects of pandemic were particularly strong for the accommodation and food service activities sector. This decrease was halted and reversed in 2021 and 2022. The number of employees in the accommodation and food service industry, for example, increased by 37,076 employees (+3.77 percent) in 2021 in comparison to the previous year. In 2023, further growth is expected, mainly due to the release of resources from the European Union (e.g., National Recovery and Resilience Plan). However, looking at the most recent data, Barbini and De Novellis (2024) show that over the past year (i.e. comparing Q3 2023 with the same period in 2022), employment in Italy has slowed down, especially in construction. The positive trend in the construction industry is coming to an end. Similarly, the recovery over the past year has seen a significant contribution from tourism-related

⁴ Hours paid are defined as the hours actually paid worked or not worked, whether paid in full or in part by the employer. Paid hours not worked include those for annual leave, holidays, sick leave, removal, employee's marriage leave, etc. They do not include hours paid in full by social security and welfare agencies (even if paid in advance by the employer). Differently, hours worked are the hours actually worked by employees. Hours not worked relating to absences for holidays, holidays, personal leave, strikes and in general hours not worked even if paid are excluded. Also, hours of short-time work are excluded.

activities, in line with the completion of reopening, and here too the momentum has probably peaked.

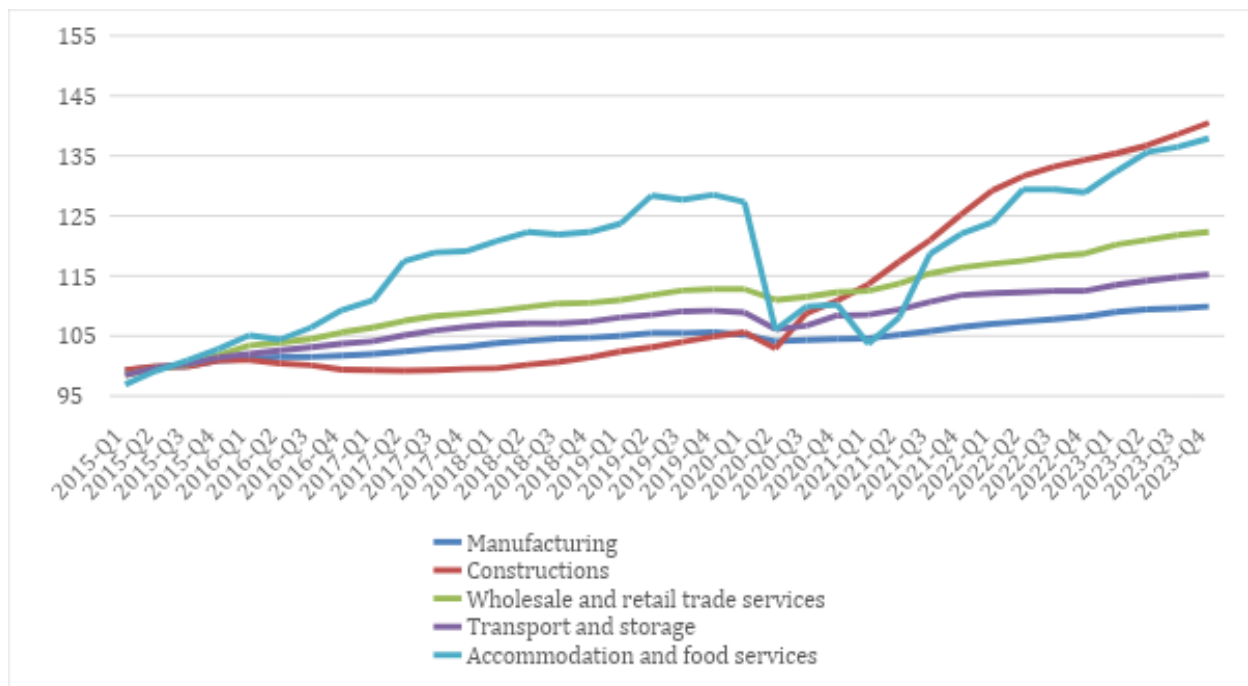
Another way to investigate the employment characterizing the five different sectors, is analysing the dynamic of both the index of total employment position and hours worked per employee reported in figures 3 and 4 respectively. Figure 3 shows that, during the 2020 Covid-19 pandemic, the employment decreased in all five sectors. Particularly massive job losses were registered in the hard-hit accommodation and food services, retail, and construction sectors. The index of hours worked per employee, reported in figure 4, suggests that total working-hour losses were greater than the decline in employment – reflecting the fact that, during 2020, the adjustment also took place through lower average working hours. The recovery of employment in the first quarter of 2021 tended to be modest and uneven. Despite a deceleration in the negative employment growth rates, sectors hit hard in the second quarter of 2020, continuing to experience declining employment in the third quarter. Accommodation and food services sector was still badly affected in the third quarter, job destruction continued in construction, retail, and manufacturing during that quarter, albeit at a lower rate. From 2021 we observe an increase in employment, while hours worked appear to be stationary throughout 2022. A new slight reduction is observed in 2023.

Figure 2. Number of employees by sector of activity in Italy, years 2008-2022



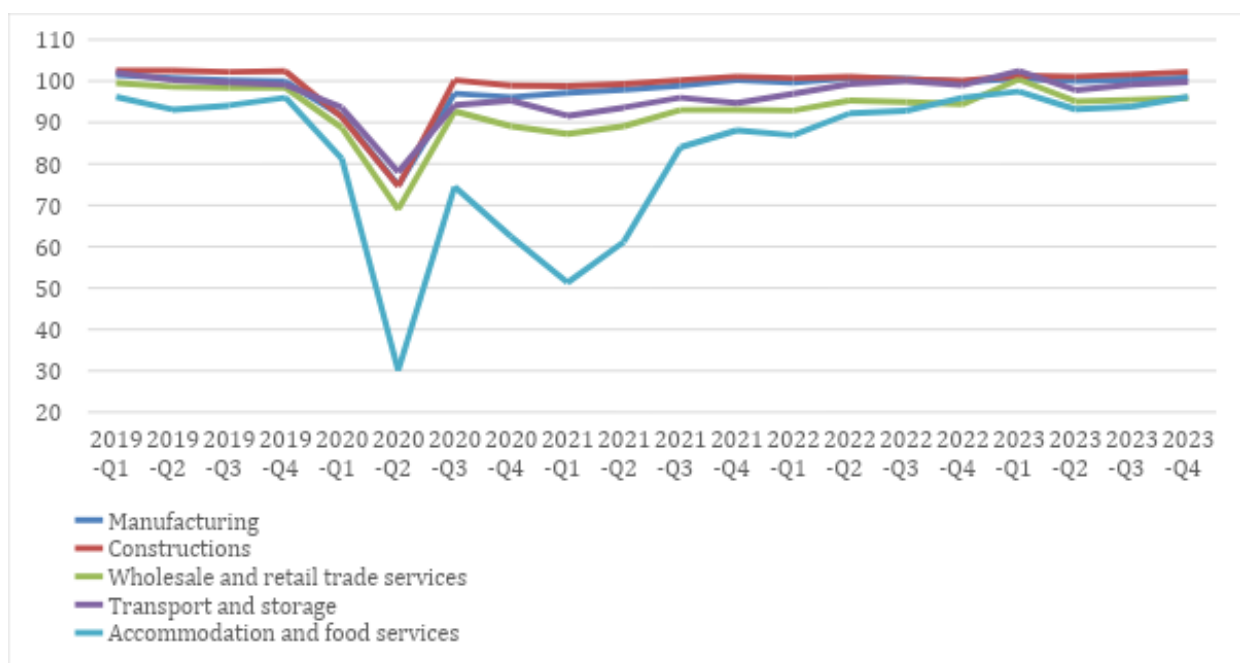
Source: Author's elaborations on Istat data 2008-2022, National Accounts.

Figure 3. Index of total employment positions by sector - quarterly data 2015Q1-2023Q4 (2015=100)



Source: Author's elaborations on Istat data 2015-2023, National Accounts

Figure 4. Index of hours worked per employee by sectors - quarterly data 2019Q1-2023Q4 (2015=100)



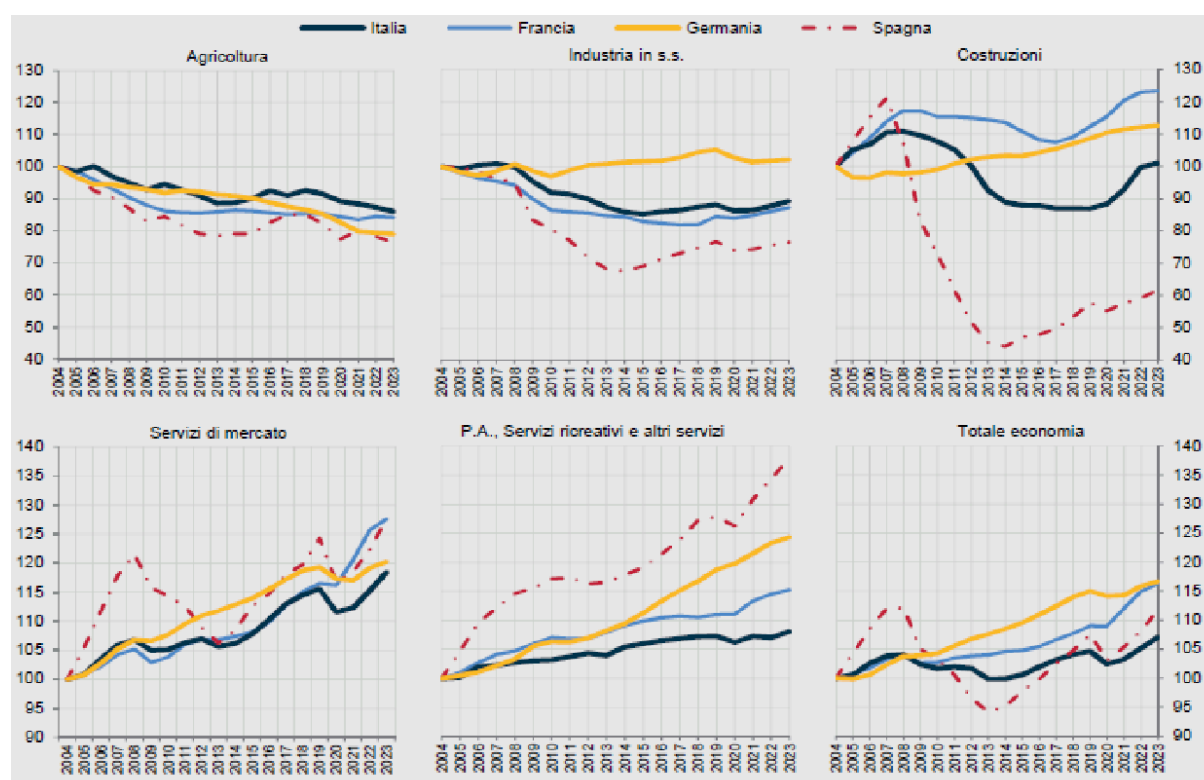
Source: Author's elaborations on Istat data 2019-2023, National Accounts

The shifts in employment among economic activities are confirmed also by the last annual report of Istat. Indeed, Istat (2024), using the National Accounts dataset, shows that in Italy the growth of tertiary sector (over 1.8 million more employed in market services and 559 thousand in personal services compared to 2004) was accompanied by a decrease in the number of people employed in the industrial and agriculture sectors (-522 thousand and -141 thousand, respectively).

The employment contraction in industry affected both the self-employed and employed components, while in the agricultural sector only self-employed employment decreased, a sign of the difficulties of small businesses that characterize the sector. Over the long term, trends in these sectors have been quite stable. However, employment in the Construction sector grew until 2008 and subsequently decreased until 2019. The incentives for building energy efficiency starting from 2020 led to its recovery, to the point of exceeding 2004 levels in 2023 (+1 percent). In the market services sector, the activities that contributed most to the expansion in the number of employed are the aggregate of Commerce, transport, and hospitality activities (+690 thousand employed, +11.6 percent) and Professional Services (1 million employed, +41.4 percent).

In a European comparative perspective, Istat (2024) also shows that in all the major European economies, including Italy, the tertiarization process continued during the period 2004-2023 (Figure 5). Compared to 2004, the growth in the service sectors was even greater in the European partners than in Italy (+20.3 and +24.4 percent respectively in Germany, +27.6 and +38 in Spain and +27.6 and +15.3 in France). However, the performance of the construction sector is more heterogeneous: in Spain the negative consequences of the financial and real estate crisis of 2008 continued until the end of 2014 and in 2023 the levels of employed people were almost 39 percent lower than twenty years earlier. On the contrary, in France and Germany, employment in construction expanded by 23.4 and 12.7 percent respectively compared to 2004, with strong fluctuations in the first case and a more regular trend in the second.

Figure 5. Index of employment by sector of economic activity in the major economies of the EU27. Years 2004-2023 (2004=100)



Source: Annual report, Istat (2024)

3.1 Employment trends and sectoral wage bargaining

Keeping in mind the employment evidence reported in figures 2-5, it is now interesting to discuss the employment effects in relation to the Italian sectoral wage bargaining system. To quantify the potential benefits of a more competitive wage setting, Kangur (2018), for example, proposes an analysis of the unemployment outcomes under sectoral-level and firm-level wage bargaining. He finds substantial gains from moving from sectoral- to firm-level wage setting of at least 3.5 percentage points lower unemployment (or higher employment) rate and a notable improvement in Italy's competitiveness over the medium term. From a theoretical point of view, Jimeno and Thomas (2013) compare labor market outcomes under firm-level and sector-level bargaining and demonstrate that unemployment is lower under firm-level bargaining, and that introducing efficient opting-out of sector-level agreements suffices to bring unemployment down to its level under decentralized bargaining. Moreover, they carry out simulations indicating that moving from sector- to firm-level bargaining results in potentially significant employment gains. This result reflects the key argument for decentralization: letting wages of individual and heterogeneous firms/plants respond to their specific conditions would save jobs—through a lower separation rate—that would otherwise be destroyed and would create new ones—through a higher job finding rate—that would otherwise not have been economical owing to higher wages. Regarding to Italy, the model predicts a fall in the equilibrium unemployment rate from 10% to 6.5%, with a corresponding 3.5 percentage point increase in the steady-state employment (Kangur, 2018).

In terms of policy implication, this means that institutions should encourage the adoption of firm-level especially given the large heterogeneity of firms in Italy. Fanfani (2023), analysing the employment effects of Italian collective wage bargaining, shows the existence of a considerable negative effect on employment and that the negative effects were prevalent among young, fixed-term contracts, those currently unemployed, and relatively less efficient firms. Moreover, these effects were stronger at firms where the share of the wage bill in revenues is higher. Also, Villanueva and Adamopoulou (2022) analyses the impacts on employment of collective contract extensions suggesting that the overall impact of extending a collective contract to all firms in an industry depends on how much employment is destroyed because of the contract's provisions concerning minimum wages and other working conditions. Assessing the benefits and costs of extensions requires comparing the increase in earnings among job stayers with the loss in earnings among job losers. The evidence suggests that earnings forgone due to extensions can offset wage gains among job stayers.

4. Contractual and “de facto” wages in Italy

During the last two years, employment in Italy has been increased in all economic sector of activity. However, wage trends paint a gloomy picture; things have never been this bad. In fact, the low wage growth has now become a structural characteristic of the Italian economy. The trends of the last period, following the energy crisis triggered by the war in Ukraine, have been particularly disappointing in a historical perspective, as well as in comparison to other major economies. A prolonged misalignment between wages and prices can influence the expectations of consumers, changing their spending decisions and lifestyles. Moreover, it also can have effects in terms of the prevalence of poverty and the level of social cohesion.

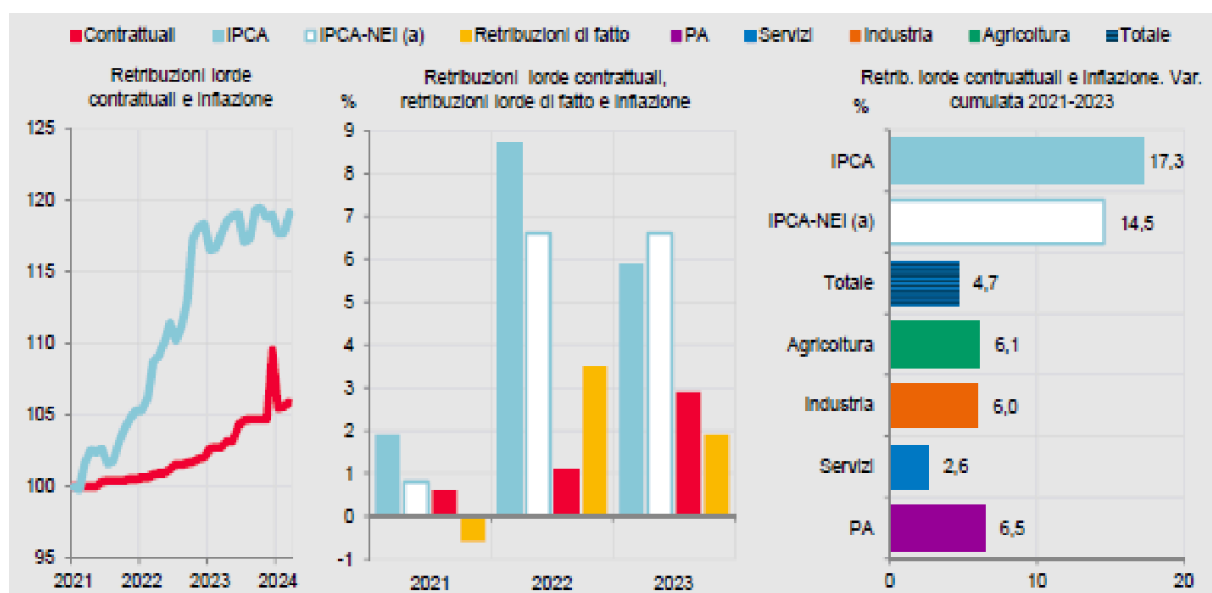
Starting from these considerations, it is interesting to analyse the trends in contractual and “de facto” wages. The former, contractual wages are based on a definition of monthly contractual wages and salaries calculated as one twelfth of annual wages determined by contractual provisions set by national collective bargaining agreements. The accounted components of contractual wages are: base salary, cost of living allowance, periodic seniority increases, shift work allowance and other general allowances (when relevant in the sector), additional months of salary and other payments regularly paid in the year term. The latter, de facto wages, consist of the earned wages, in other words, the remuneration in cash, payable to all persons counted on the payroll in return for work done during the accounting period. Wages in kind are excluded. “De facto” wages include the values of any social contributions, income taxes, payable by the employee even if they are withheld by the employer and paid directly to social insurance schemes and tax authorities on behalf of the employee. “De facto” wages differ from national contractual (agreed) wages because the last ones include only the components related to national labour agreements.

Given the two levels of Italian bargaining system, it is imperative to pay attention on the one hand to the dynamics of contractual wages and the inflation rate, and on the other hand to the evolution of de facto wages at the aggregate level. Over the period from 2021-2023, hourly contractual wages grew at a rate significantly lower than the observed inflation rate, with a pronounced gap in 2022 (7.6 percentage points): between January 2021 and December 2023, consumer prices have overall

increased by 17.3 percent, while contractual wages rose by 4.7 percent (see panel on the left of figure 6).

At the sector level, wage growth in Agriculture, Industry and Public Administration, albeit with different timing, was overall similar and equal to about one-third of inflation rate, while for Services it was much smaller (only by 2.6 percent) (see panel on the right of figure 6). After a period of almost three years, the trend dynamics of contractual wages has returned, as of October 2023, to exceed that of prices, thanks to the continued deceleration of inflation. However, on average, the wage growth was still lower than that of inflation. Hourly contractual wages, the red bar in central panel of figure 6, in 2023 increased by 2.9 percent, a strengthening compared to 2022 (1.1 percent). In the same period, the dynamics of de facto wages, the yellow bar in central panel of figure 6, estimated by the National Accounts showed a significant slowdown (1.9 percent compared to 3.5 percent in the previous period). The different dynamics of the two wage measures (contractual vs de facto wages) is probably due to the negative trend of gross wages (per work unit) registered in the Public Administration sector. Indeed, in this sector the de facto wages of 2023 did not include the increase in the contractual vacation allowance provided for by Legislative Decree 145/2023, whereas the wages of 2022 contain the arrears relating to the renewals of the three-year period 2019-2021 (Istat, 2024). Finally, consumer prices, although decelerating, still marked a 5.9 percent growth in 2023, resulting in a further retreat in real terms of wages (see central panel of figure 6).

Figure 6. Contractual gross wages, de facto wages, and consumer inflation: indices January 2021=100 (left); annual percentage changes (center); cumulative percentage changes (right). Years 2021-2023



Source: Annual report, Istat (2024)

In this context, also De Novellis (2024) proposes a comparison between contractual and de facto wages. First, it shows that, since the Istat index of contractual wages between 2019 and 2023 increased by 5.4 percent, while the inflation rate (NIC index) in the same period was 16.2 percent, in

real terms contractual wages decreased by 9.3 percent in four years. When we look at the trend in “de facto” wages, according to De Novellis (2024), the situation appears better. Considering the entire period since the beginning of the pandemic, de facto hourly wages in Italy would have increased by 7.8 percent, with a cumulative real reduction of 7.2 percent.

The difference between the trend of de facto wages and contractual wages in the post-pandemic period seems to be significant, over two percentage points. The difference is usually referred to with the expression “wage slippage” that appears to be partly due to some changes in the labor market (of an organizational nature, in the use of social safety nets, in tasks, in working methods) and to the scarce increase defined by national contracts (De Novellis, 2024). Indeed, the increases provided for by the national contracts may not be enough to recover the purchasing power’ losses due to the inflation growth.

4.1 Sectoral analysis

In order to examine the role of national contracts compared to that of other items of pay, we compare the hourly wage provided for in the collectively bargained pay scales discussed in Work Package 4 of the BARWAGE project, with hourly wages paid in each of the selected five Italian sectors.

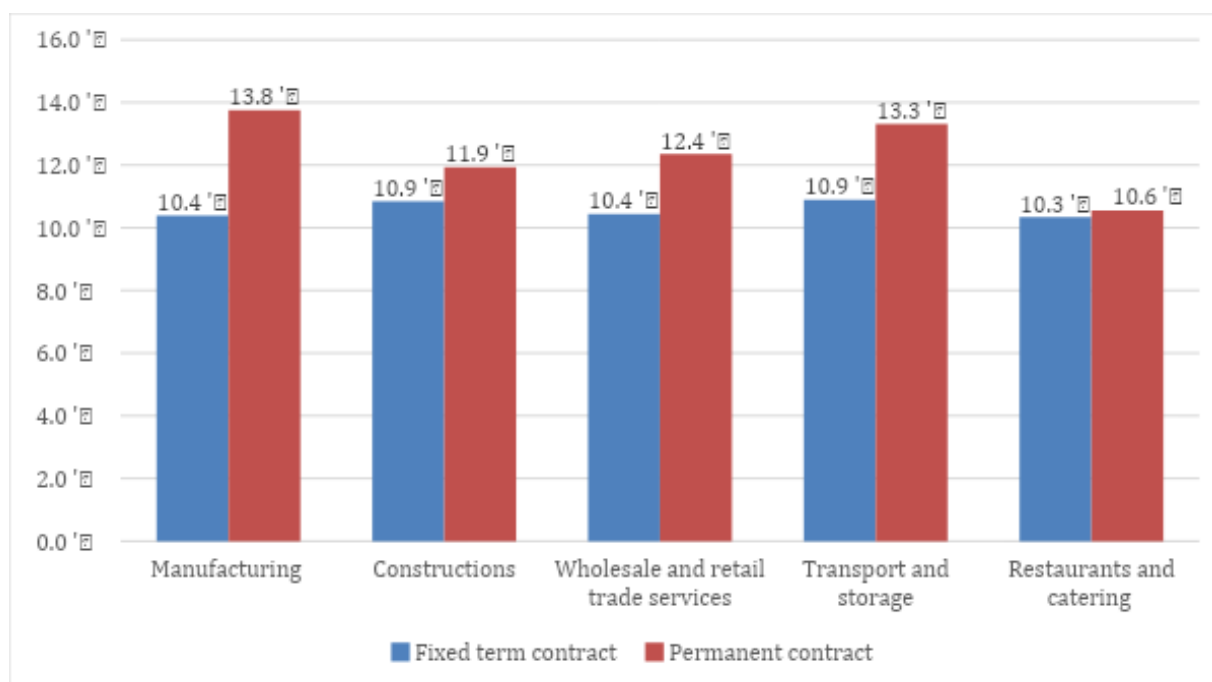
To this end, we use data from the RACLI register (*Registro annuale su retribuzioni, ore e costo del lavoro per individui e imprese*) provided by Istat. RACLI records information on employment, wages, labor costs and hours for each employee job (a person might have one or more jobs, with the same or different employer, at the same time or not) and related employer (LEED structure employer-employee Database) in the private non-agricultural sector. It is consistent with the Employment and Business Register (*ASIA Occupazione e Imprese*) and the Business Local Unit (ASIA UL). The main statistical unit of the RACLI register is the employee job position defined as the work relationship established between an economic unit and an individual and defined by a starting date. The RACLI register produces annual information on wages and hours paid with a high level of detail with regard to the characteristics of the job position (working time, duration of the contract, contract position, etc.), of the individual (gender, age, country of birth, level of education through the integration with the Population Register) and of the economic unit (economic activity code, size class, local units, etc. thanks to integration with the ‘Statistical Business Register’ ASIA).

To shed light on the wages’ distribution, we use the median value of observed gross hourly wages. The median is “the one in the middle” whereas the mean value is a computation more sensitive to extreme values or outliers in the data. If there are a few extremely high or low values in the dataset, the mean can be skewed in their direction. In the case of wage distribution, where a small number of extremely high-wage earners can significantly impact the average, the mean may not accurately represent the typical wage of an employee. Differently, the median provides a better representation of the typical wage level of employee in a population, as it is not influenced by a few very high or very low values.

On the base of this considerations, in Figure 7 we report the median gross hourly wages for year 2021 distinguishing by sectors and type of contract. For all sectors, the gross hourly wage paid by permanent contracts is higher than that paid by fixed-term contracts: in the manufacturing sector

the difference is equal to 3.4 euro, while the restaurant and catering sector shows a difference equal to 0,3 euro. However, this last sector is also the one with the lowest gross hourly wage followed by the wholesale and retail trade services sector.

Figure 7. Median gross hourly wages by sectors and type of contract – Year 2021



Source: Author's elaborations on RACLI dataset, Istat 2021

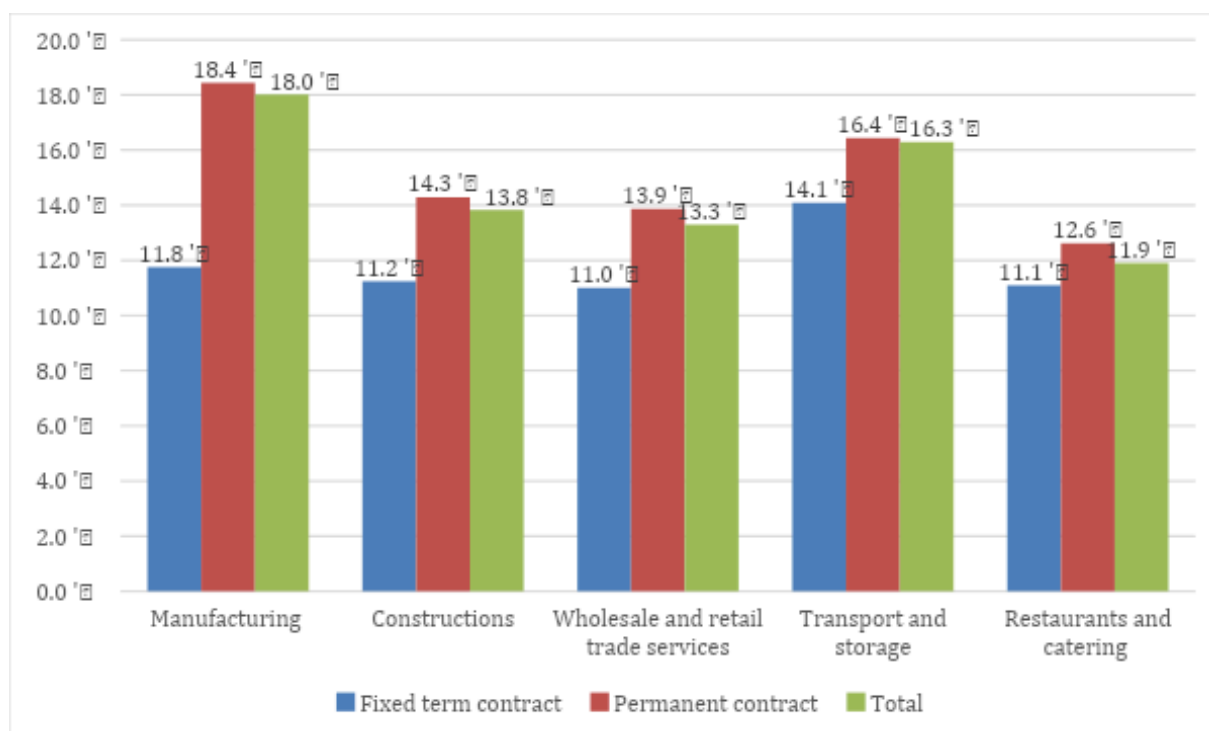
The evidence reported in figure 7 confirms that temporary and permanent workers receive different compensations. Most empirical studies do not detect a wage premium for employees working under fixed-term work arrangements contradicting what compensating wage differentials theories state. Conversely, a wage penalty for temporary workers has been detected in most of the empirical exercises (Picchio 2008; Kahn 2012; Dias da Silva and Turrini 2015). For Italy, the wage gap between permanent and temporary workers has been highlighted by Picchio (2006), Rossetti and Tanda (2007) and Brunetti et al. (2022).

In addition to the type of contract, another important factor that influence employees' wages is the job profile. Blue-collar and white-collar employees, for example, have different job descriptions and duties. They also typically have different needs that management teams keep in mind on nearly every project. This is especially the case where blue- and white-collar employees work together on a complex set of tasks. They do different work, generally have different education and training backgrounds and, therefore, they are very likely to earn different pay.

Figures 8-10 show the median gross hourly wages by job level (middle manager and white collars, blue collars, and apprentices), sector, and type of contract. As expected, in 2021, Italian workers employed in executive positions earn substantially more than those in entry-level roles such as

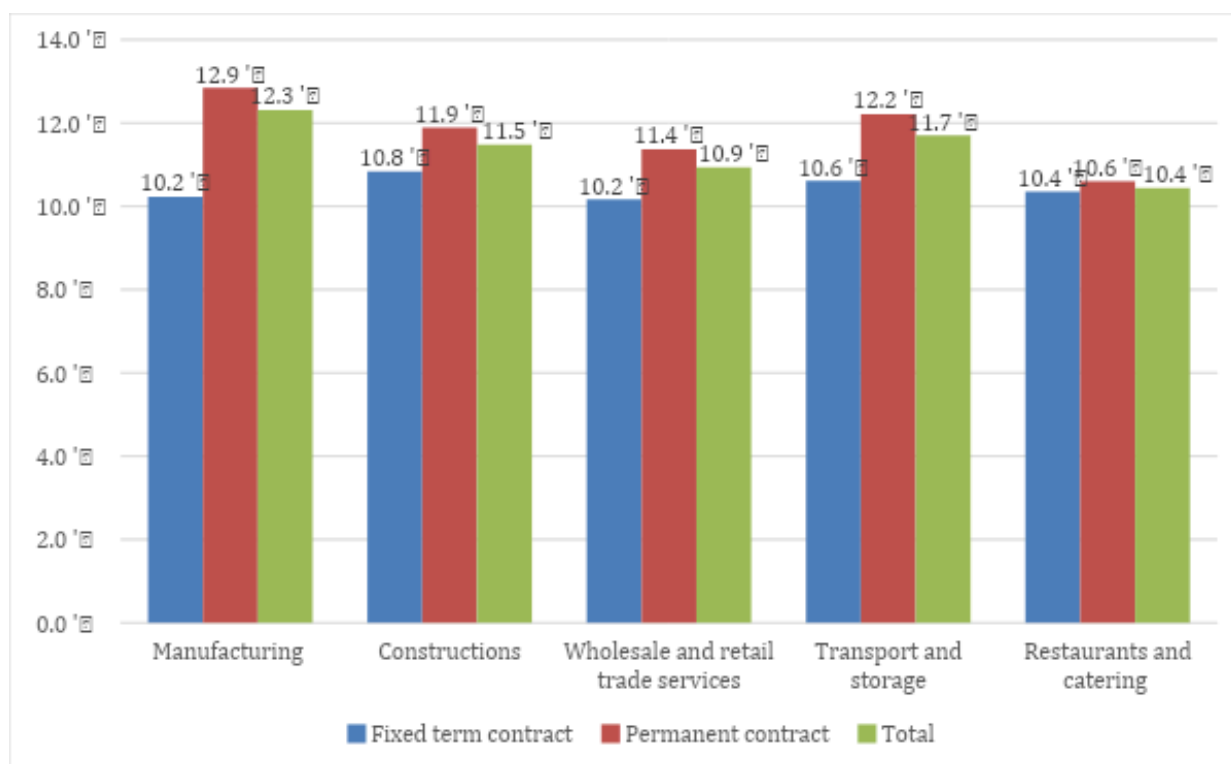
apprentices. However, wage differentials vary across sectors. Looking at the manufacturing industry, we notice that the middle managers' hourly wage is double those of apprentices, while in the restaurant and catering services sector this difference is thirty per cent. Overall, the wage differential between middle managers/white collars and blue collars is reflected in a penalty for the latter that vary from -1.5 euro in the restaurant and catering sector to -5.7 for the manufacturing.

Figure 8. Median gross hourly wages of middle manager and white collar by sectors and type of contract – Year 2021



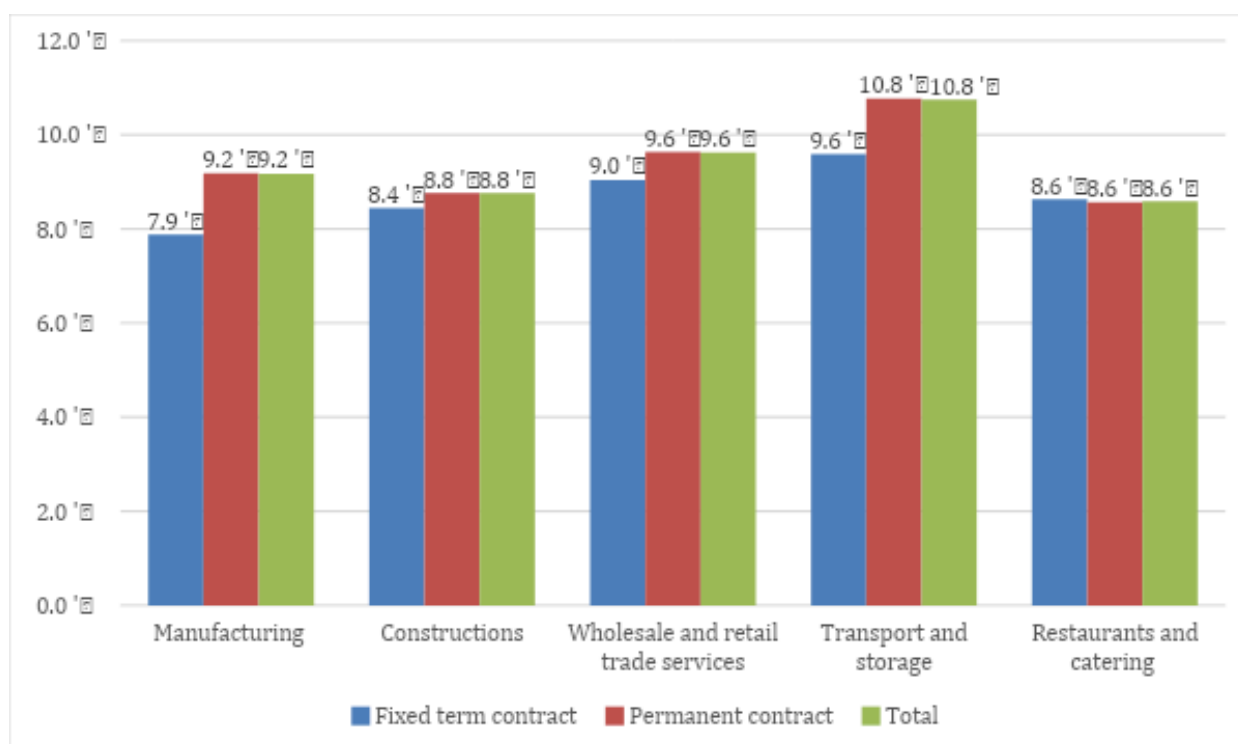
Source: Author's elaborations on RACLI dataset, Istat 2021

Figure 9. Median gross hourly wages of blue collar by sectors and type of contract – Year 2021



Source: Author’s elaborations on RACLI dataset, Istat 2021

Figure 10. Median gross hourly wages of apprentices by sectors and type of contract – Year 2021



Source: Author’s elaborations on RACLI dataset, Istat 2021

The last aspect that it is important to analyse is the role of gender. In 2021, in the EU the gender pay gap, that is the difference between men's and women's pay, based on the average difference in gross hourly earnings of all employees, stands at 12.7% in 2021. It varies across Europe: it is below 10% in Slovenia, Poland, Italy and Luxembourg, but wider than 20% in the United Kingdom, Slovakia, Czech Republic, Greece, Germany, Austria and Estonia. Although the overall gender pay gap has narrowed in the last decade, in some countries the national gender pay gap has been widening (Latvia, Portugal).

The gender pay gap is a complex issue caused by several interrelated factors. Women and men carry out different jobs and often work in different sectors: in the health and social work sector alone, women make up 80% of all workers. Sectors where women are in the majority have lower wages than those dominated by men. In some cases, women and men are not paid the same wages although they carry out the same work or work of equal value. This may be the result of so-called 'direct discrimination' where women are simply treated less favourably than men, or it may be due to a policy or practice that, although not designed to discriminate, results in unequal treatment between men and women. Both types of discrimination are prohibited under EU law but are unfortunately still present in some workplaces (European Commission 2013).

In terms of employment differences, Piazzalunga (2018) shows that women are highly represented in Education and in Commerce, while men in Manufacturing and in Scientific sectors. Men are twice as likely to be managers, and more likely to be "professionals" (despite teaching professionals being also included), whereas women more represented among technicians and other professions. In terms of wages, figure 11 allows us to understand the amount of wage gap between male and female employees. Indeed, the figure reports the hourly wages for women and men in the five selected sectors of economic activity. The gender pay gap arises and the manufacturing is the sector with the highest gender pay gap: women earn about 1.4 euro less than men, that is a 10% less. Differently, the median gross hourly salary of women working in the transport and logistics industry amounted to over 13 euros, which was slightly higher than the median wage of men (12.4 euro). The construction and wholesale sectors display a similar situation: the small wage gap is in favour of women, but it is important to note that these are sectors, especially that of construction, in which female employment is very low. Finally, in the restaurant and catering sector, we observe a wage penalty for women.

Figure 11. Median gross hourly wages by sectors and gender – Year 2021

Source: Author's elaborations on RACLI dataset, Istat 2021

In this context, institutional factors, such as the nature of industrial relations, welfare state and wage formation system, can make a real difference in addressing the gender pay gap. As discussed in the introduction, collective bargaining in Italy is essentially a voluntary system although there are some basic guarantees on trade union rights and pay in the national Constitution.

Considering the increasing importance that the normative has given to the decentralized collective bargaining in Italy starting from 1993, it is of particular interest to assess its role in shaping gender wage differences. Recent studies have shown that in some countries, such as Spain (de la Rica et al., 2010) and United States (Munoz-Bullon, 2010), most of the overall GPG derives from the gap in the variable part of wage (such as annual bonuses and allowances not paid at each pay period). The performance pay increases wage inequality as women are less likely to receive additional remuneration due to a lower job mobility and a presence in industries and firms in which a clear glass ceiling effect operates (de la Rica et al., 2010). Recent research shows that for Italy results differ. Selecting the sample of employers receiving bonuses linked to productivity, in 2002 the gender pay gap amounts to 13% compared to the 18% among those not receiving them (Zizza, 2013). Ricci (2010) suggests that the structure of female occupation decreases their possibility to receive any additional wages being mostly employed in small enterprises belonging to less competitive sectors. According to this view performance pay can contribute to increase wage differentials.

Although there is an open debate on the nature and the sources of gender pay gap, it is now considered as the most important indicator of equal pay in the labour market. In fact, the gender pay gap belongs to the set of the European sustainable development indicators. The gender pay gap is also a key indicator in the framework of the Strategy for equality between women and men of the European Commission (Gnesi et al. 2016).

5. Conclusion and discussions

This report, developed for the BARWAGE project (European Union social dialogue grant 101052319), aimed to discuss the nature of the Italian collective bargaining system and its possible effect on employment and wages considering also the sectoral heterogeneity. Italy is one of the European countries without a statutory minimum wage and where wages are set by a centralised collective bargaining agreement. More precisely, a two-tier system was created: the first tier consists of sector/industry-level CBAs, while the second one consists of decentralised agreements at the firm (or territorial) level, where negotiations occur directly between employers and firm-level union delegations. However, despite the presence of this second level of bargaining, national agreements remained the main instrument of regulation of employment conditions and wages.

The evidence reported in this paper suggests, first, that in Italy the employment growth of tertiary sector was accompanied by a decrease in the number of people employed in the industrial and agriculture sectors. Among the service sectors, the accommodation and catering sector is the one that during the pandemic period has borne the higher loss. In terms of wages, during the last decade (2010-2020) annual average wages showed the most negative development, with a fall of -8.3%; second, that there is a huge difference between contractual and “de facto” wages. This difference can be partly due to some changes in the labor market or to the scarce increase defined by the national contracts. Indeed, the increases provided for by the national contracts may not be enough to recover the purchasing power losses due to the inflation growth. An additional limit to the increase of contractual wages is the adoption of “pirate agreements”. We observe great hourly wage differences between sectors, between job profiles (white collars vs blue collars and apprentices), and between male and female employees.

Although there are open debates about the effects of collective bargaining on employment and wages, it is well known that institutional factors, such as the nature of industrial relations, can make a real difference in addressing pay and employment gap. Despite the Italian collective bargaining is a voluntary system there are some basic guarantees on pay in the national Constitution.

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