

## THE STRUCTURE OF LABOUR COSTS IN ITALY | YEAR 2020

# Average hourly labour costs: in Italy lower than in the Euro area

For the greatest economic units (with 1.000 or more employees) average hourly labour costs were estimated to be **33.3 euros**, approximately 10 euros higher than the economic units with 10-49 employees (23.1 euros).

The hourly labour costs in the Financial and insurance sector (51.6 euros) were almost 33 euros higher than in the Administrative and support service activities (18.8 euros).

In 2020, the first year of the pandemic, the hours worked per employee were 6.6% lower than in 2016.

## 29.4 euros

**Average hourly labour costs**

+ 5.3% compared to 2016 labour costs

## 41,081 euros

**Annual labour costs per employee**

## 1,398

**Annual hours worked per employee**

1,519 hours in case of full-time employee, 895 hours in case of part-timer

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The report is based on data from the Structure of Earnings and Labour Cost Survey (RCL-LCS) referred to the year 2020. As required by the European Regulation, the survey concerns employees of enterprises and institutions (public and private) with 10 or more employees in the industrial and service sectors. These were in 2020 12.5 million job positions (71.9% in Services and 28.1% in Industry and construction): 73.1% of total employment referring to the private sector while the remaining 26.9% being attributed to the public sector.<sup>i</sup> For the private sector, data from a direct survey are combined with data from the Annual Register of Individual Labour Costs and the ASIA Business Register, while for the public sector, data from the Thematic Labour Register, the Register of Public Institutions and data from administrative sources are used (cf. Methodological note).

## Annual labour costs highest in Industry (except construction)

In 2020, average annual labour costs per employee – that mean the total expenditure borne by employers for employing staff – were estimated to be 41,081 euros. They are divided into three main components: 72% represented by gross wages and salaries (on average 29,591 euros), 27.7% by employers' social security contributions<sup>ii</sup> (on average 11,366 euros) and 0.3% by intermediate labour-related costs (on average 123 euros) which also include 0.2% vocational training costs.

The lowest labour costs were recorded in Construction, mainly due to the low level of gross wages and salaries, the highest one were in Industry (except construction).

Average hourly labour costs were estimated to be 29.4 euros. The main components are wages and salaries (21.2 euros), employers' social contributions (8.1 euros) and intermediate labour-related costs (0.1 euros). The highest labour costs were in Other services (32.1 euros of which 23.4 gross wages and salaries), the lowest were in the Administrative and support service activities (18.8 euros).

Hours worked per employees were highest in Constructions (1,557) and in Industry except constructions (1,512).

## LABOUR COSTS AND HOURS WORKED: KEY FIGURES

Year 2020, euro and number of hours

ECONOMIC ACTIVITIES	Annual average labour costs per employee (euro)			Annual average labour costs per hour (euro)			Hours worked per employee
	Total	of which:		Total	of which:		
		Gross wages	Social contributions		Gross wages	Social contributions	
Industry except construction (B-E)	44,176	31,370	12,642	29.2	20.7	8.4	1,512
Construction (F)	37,568	26,031	11,318	24.1	16.7	7.3	1,557
Services of the business economy (G-N)	38,778	27,990	10,634	28.0	20.2	7.7	1,385
Other services* (O-S)	42,036	30,676	11,319	32.1	23.4	8.7	1,308
<b>Total (B-S)</b>	<b>41,081</b>	<b>29,591</b>	<b>11,366</b>	<b>29.4</b>	<b>21.2</b>	<b>8.1</b>	<b>1,398</b>

\* Includes NACE Rev. 2 sections O to S, i.e. Public administration, defence, compulsory social security; Education; Human health & social work activities; Arts, entertainment & recreation and Other service activities.

### The labour costs structure: more than 70% for gross wages and salaries

The main component of labour costs are gross wages and salaries (Figure 1). It is given by the payment in cash, which represented in 2020 71.3% of labour costs, and the component in kind, residual, which amounted to 0.7% of labour costs, for an average amount of 284 euros. Gross wages and salaries in cash can also be divided into: recurring amounts payable in each month (22,744 euros, or 55.4% of labour costs); non-recurring amounts - payments received less frequently - such as additional payments on annual or an ad-hoc basis, annual premiums, etc. (3,856 euros, or 9.4%); remuneration paid for statutory, contractual or voluntarily granted leave and public holidays or other paid days not worked (2,700 euros, 6.6%)<sup>iii</sup>.

The second component of labour costs are employers' social contributions, which represented in 2020 27.7%, and consist of: actual components, as statutory social-security contributions (8,668 euros, 21.1%), collectively agreed, contractual and voluntary social-security contributions (155 euros, 0.4%), severance pay (TFR is the Italian acronym) (1,521 euros, 3.7%) and employers' imputed social contributions (1,023 euros, 2.5%).

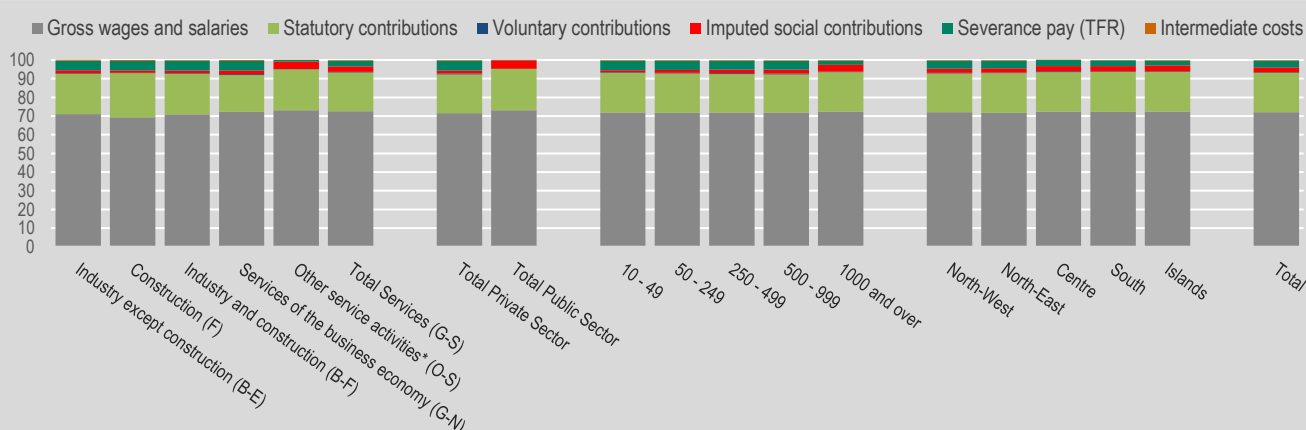
The intermediate labour-related costs finally represent a residual quota, amounting in 2020 to 123 euros (0.3%).

The ratio between employers' social contributions and annual wages and salaries indicates that, on average, the total amount of social contributions was equal to 38.4 euros per 100 euros of gross wages and salaries.

However, the structure of labour costs ranges according to the sector of economic activity, the size class and the geographic location of the economic unit. The incidence of gross wages and salaries (including the component in kind) on labour costs in fact varied from 69.3% in Construction to 76.1% in Arts, entertainment and recreation; it weighted 71.7% for economic units with between 50 and 249 employees (72.3% among those with 1,000 or more employees), while analysing for geographic location, the share of gross wages and salaries was 72.3% in the Centre and in the Islands and fell to 71.7% in the North-East.

**FIGURE 1. COMPONENTS OF THE AVERAGE LABOUR COSTS PER EMPLOYEE**

Year 2020. Percentage composition



\* Includes NACE Rev. 2 sections O to S, i.e. Public administration, defence, compulsory social security; Education; Human health & social work activities; Arts, entertainment & recreation and Other service activities.

## Highest labour costs per employee in the financial and insurance activities

Labour costs are mainly influenced by gross wages and salaries, which account for more than two thirds on the total; employers' statutory social-security contributions, in turn, are also proportional to gross wages and salaries. Thus, the results are quite similar both by relating the labour costs per employee to its national average and by comparing gross wages and salaries per employee to its national average.

In 2020, annual labour costs per employee were highest in the Financial and insurance activities (+85% compared to the average of the Industry, Construction and Services aggregate), in the Mining and quarrying sector (+78.9%) and in the Electricity, gas, steam and air conditioning supply (+65.7%). On the opposite, the lowest costs were found in the Accommodation and food service activities (-57.7%), in the Other service activities (-40.2%) and in the Administrative and support service activities (-39.4%) (Figure 2).

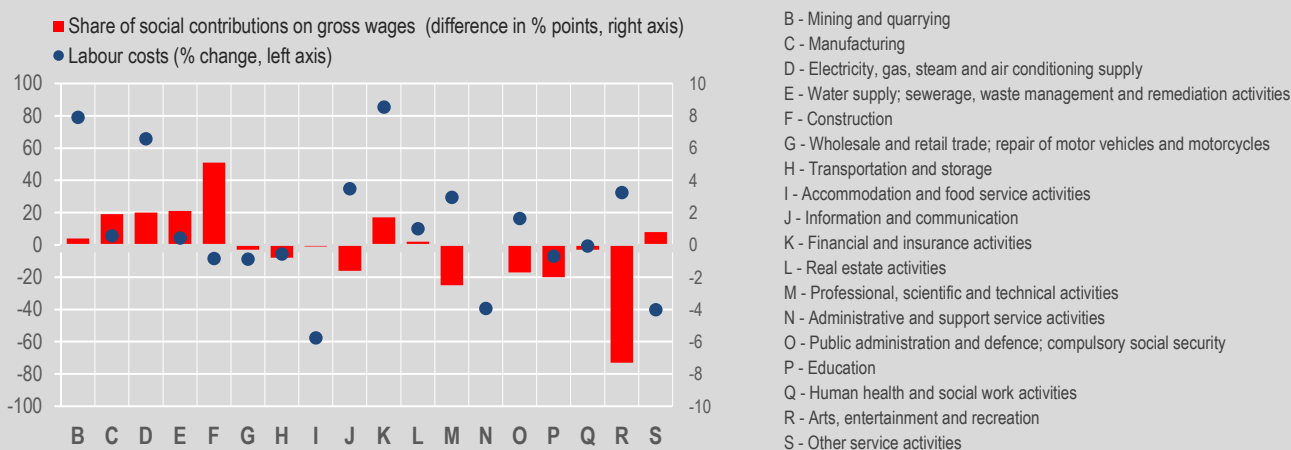
The Construction sector was characterised by the highest share of employers' social contributions compared to gross wages and salaries, 5.1 percentage points higher than the overall average of the Industry, Construction and Services aggregate (reaching 43.5%), as the effect of the important role played by the high insurance premiums against accidents at work.

Conversely, in the Arts, entertainment and recreation sector: the share of employers' social contributions amounted at 31.1%, 7.3 points below to the average. In these cases, to the average gross wages - influenced by the presence of professional sportsmen and performing artists at high remuneration - do not correspond proportional social contributions, because for the part of the wages and salaries exceeding the maximum threshold, only the solidarity social contribution is due and not social contribution for pensions.

Labour costs were lower than the national average both for economic units belonging to the size class 10-49 employees (-22.7%), and for those having between 50 and 249 employees (-2.7%); it is higher in the larger economic units: +13.2% in the class 500-999, +11.1% for units with at least 1,000 employees and +7.3% in those with 250-499 employees.

Labour costs were also lowest in the South and Islands, where they were below the national average of 12.8% and 10% respectively (in the North-West they are above the national average of 6.4% and in the Centre of +3.4%), and in the private sector (-4.2% compared to the national average, while in the public it was 11.5% higher).

**FIGURE 2. LABOUR COSTS AND SHARE OF SOCIAL CONTRIBUTIONS ON GROSS WAGES AND SALARIES**  
Year 2020. Percentage change from the mean; difference in percentage points from the mean (right axis)



### Almost one-tenth of gross wages and salaries is for hours not worked but paid

On average, non-recurring amounts (payments received less frequently than monthly as thirteenth and fourteenth month pays, premiums, golden handshakes, etc.) weighted 13% on gross wages and salaries per employee. Overall, the weight was higher in the private sector (13.8%) than in the public sector (11.2%).

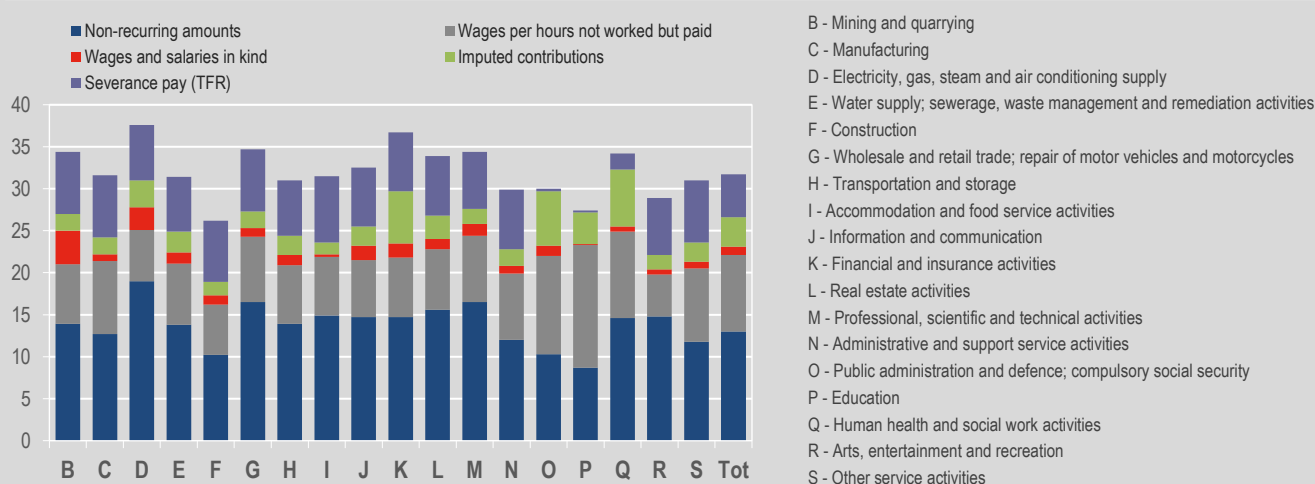
Wages and salaries in kind (meal value, stock options, fringe benefits) averaged 1%, reach the highest in the Mining and quarrying sector (4%) and reached the lowest in the Education (0.1%), where the public component is usually prevalent.

Wages for hours not worked but paid by the employer (statutory, contractual or voluntarily granted leave and public holidays or other paid days not worked accrued in 2020) weighed an average of 9.1%: rose to 14.6% in the Education sector and fell to 5% in that of the Arts, entertainment and recreation.

Imputed employers' social contributions accounted for 3.5% of gross wages per employee (including guaranteed remuneration payed by the employer for event of sickness, maternity or accidents, payment to employees leaving the enterprises, other imputed social contributions of the employer, etc.). They amounted to 6.8% in the Human health and social work activities, 1.4% in the Accommodation and food service activities. On average, they accounted for 2.3% in the private sector and 6% in the public sector, where the amounts paid to workers for absence due to sickness, maternity and accidents are entirely borne by the institutions (in the private sector, the share borne by social security funds does not count towards labour costs).

The share of TFR on gross wages and salaries was equal to 5.1%, without significant differences between economic activity sectors; the only exception concerns those activities of the public sector in which the severance pay was particularly low as a result of its payment, counted among the statutory social contributions.

**FIGURE 3. COMPONENTS OF LABOUR COSTS COMPARED TO GROSS WAGES AND SALARIES**  
Year 2020. Percentage ratio referring to gross wages and salaries



## The average number of hours worked ranges considerably across sectors

In 2020, the annual average number of hours worked by an employee was 1,398, accounting for 82.9% of the 1,686 paid hours. If the employee is full-time, the hours rise to 1,519 (82.8% of the 1,834 paid hours), if part-time, they fall to 895 (83.2% of the 1,075 paid hours). A part-time employee thus worked, on average, 58.9% of the time worked by a full-time employee.

The average number of hours worked per employee was highest in the Electricity, gas, steam and air conditioning supply sector (1,681, +20.2% compared to the total mean), the same applied to paid hours (2,011, +19.3% above the total mean).

The Accommodation and food service activities sector stood out for the lowest number of hours worked (883, -36.8% from the mean) and paid (1,034, -38.7% below the mean). Slightly highest values were recorded in the Arts, entertainment and recreation sector (1,189 hours worked and 1,399 paid). The Education sector also showed low values (1,055 hours worked and 1,314 paid), in this case the low values stem from not counting the hours dedicated by teachers to activities performed outside the workplace (for correcting homework, preparing lessons, etc.)<sup>iv</sup>.

In the largest enterprises and institutions (1,000 and more employees), the hours worked per employee (1,371) were lower than total mean (-1.9%) and slightly lower than the average hours worked in enterprises with 10-49 employees (1,376), which also recorded the lowest number of hours paid (1,609).

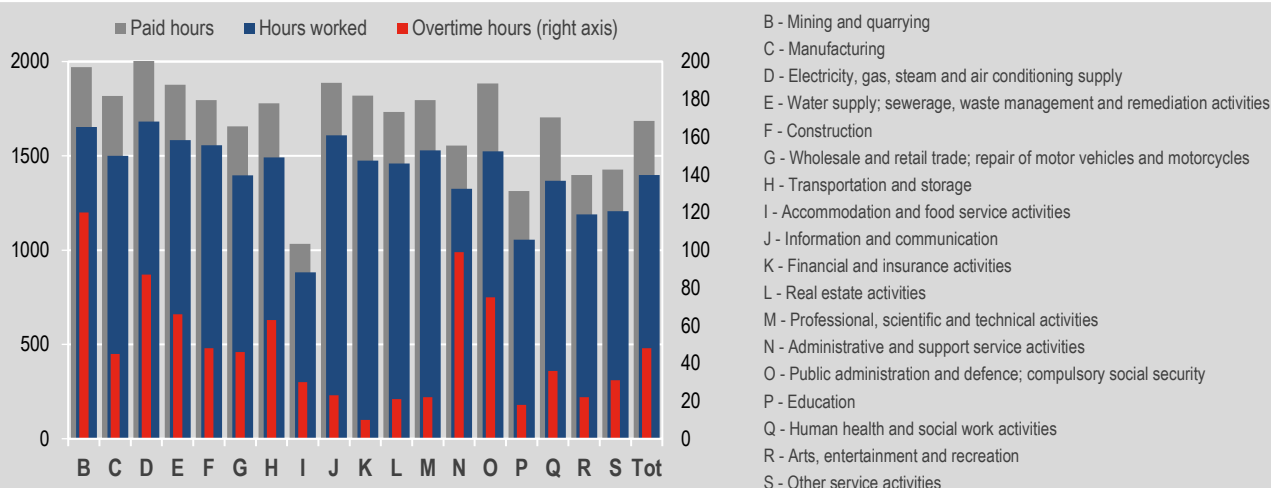
The values for hours were lowest in the South (1,315 worked and 1,581 paid) and on the Islands (1,323 and 1,606 hours). In the Centre, the number of hours worked amounted to 1,413 and the number of paid hours to 1,701, both values close to those registered in the northern regions. The North-East, with 1,426 hours worked and 1,721 hours paid, exceeded the North-West (1,422 and 1,717 hours respectively).

On average, an employee worked 48 hours of overtime during 2020, corresponding to 3.4% of hours worked. Higher values are found in Administrative and support service activities, where overtime hours accounted for 7.5% of hours worked, and in Mining and quarrying (7.3%). The weight of overtime work, on the other hand, was minimal in Financial and insurance activities (0.7%).

The number of overtime hours increased with increasing company size, from an average of 34 hours per year for economic units between 10 and 49 employees to 57 in economic units with at least 1,000 employees (Figure 4).

**FIGURE 4. PAID HOURS, HOURS WORKED AND OVERTIME HOURS**

Year 2020. Hours in annual average



### Wide differences of hourly labour costs by sector of activity

In 2020, average hourly labour costs were estimated to be 29.4 euros. This average masks significant gaps between sectors of economic activity. The hourly labour costs exceeded by more than 50% the national value in the Financial and insurance activities (51.6 euros), Arts, entertainment and recreation (45.7 euros) and Mining and quarrying (44.5 euros). The lowest costs were found in the Administrative and support service activities (18.8 euros) and in Accommodation and food service activities (19.7 euros). The difference was about 6 euros between the public sector (33.9 euros) and the private sector (27.8 euros).

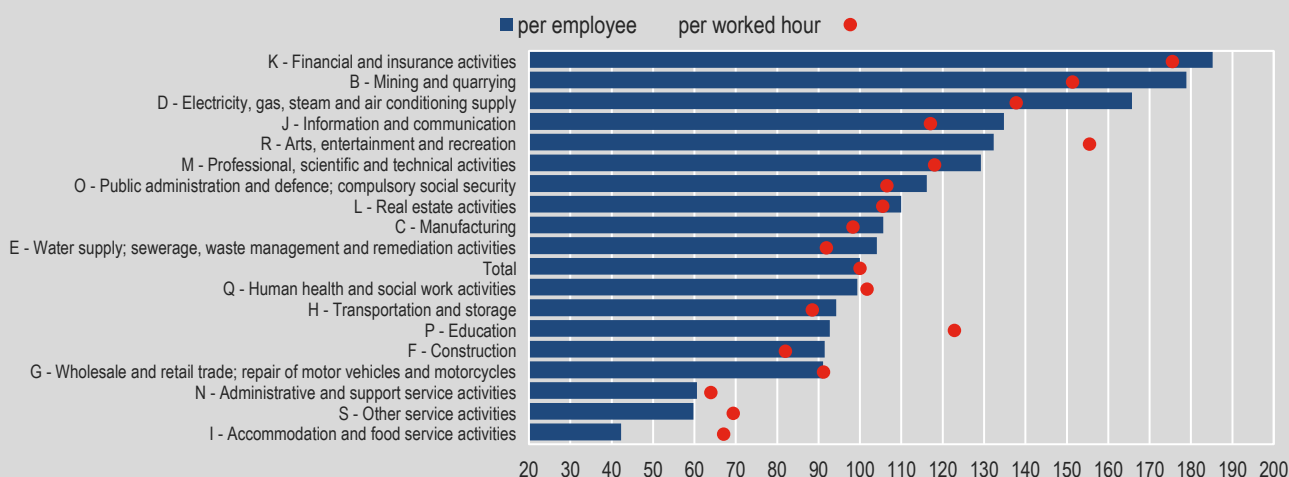
Employers' social security contributions represented 24% of total hourly labour costs. They were higher than national average (7.0 euros) in the Financial and insurance activities (12.1 euros), Mining and quarrying (10.1 euros) and Electricity, gas, steam and air conditioning supply (9.7 euros). They are lower in Administrative and support service activities (4.2 euros) and in Accommodation and food service activities (4.3 euros).

When presenting data in terms of index numbers (with the national average cost equal to 100), it is noted that in Education the hourly costs were higher than the national average, while the costs per employee were lower (Figure 5); the high value of hourly costs has been determined by the low number of hours counted as worked due to non-availability of data on hours worked by teachers outside the school. In contrast, in Manufacturing and Water supply, sewerage, waste management and remediation activities the hourly cost was lower than the national average while that per employee is higher, to indicate a high average number of hours worked.

Hourly labour costs (and their main components) increased with increasing company size in all macro-sectors of economic activity: there was a difference of more than 10 euros per hour between economic units with 1,000 or more employees and class 10-49, from 33.3 to 23.1 euros. This gap was particularly significant in Industry except construction (14.5 euros difference) and in Construction (13 euros), more contained in Services of the business economy (6.9 euros).

**FIGURE 5. AVERAGE ANNUAL LABOUR COSTS PER EMPLOYEE AND PER HOUR WORKED**

Year 2020. Index numbers, Total=100



### Low wages and salaries in Administrative and support service activities

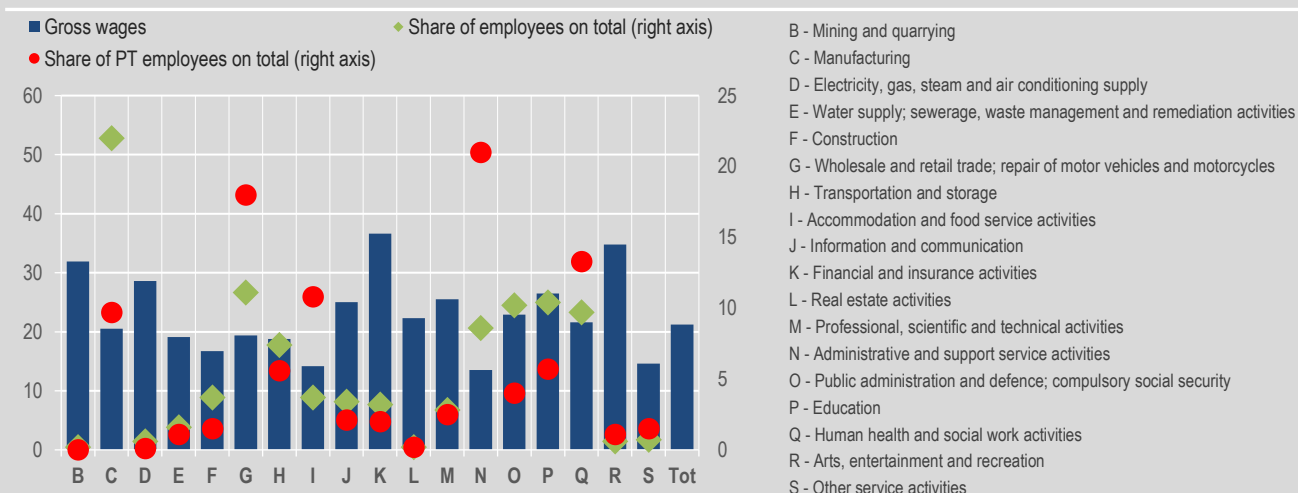
The average gross hourly wages were 21.2 euros and the variability by sector of economic activity was lower than the indicator per employee (Figure 6).

The hourly wages of Administrative and support service activities were significantly below the national average (13.5 euros per hour, 36.3% less than the national average), those of the Accommodation and food service activities (14.2 euros per hour, -33.0%), and those of Other service activities (14.6 euros per hour, -31.1%). It should be noted that these sectors were characterised by the particularly high presence of part-time employees; in particular in administrative and support service activities, the share of part-time workers was 47.3%, which represented 21.0% of part-times nationwide.

The highest average hourly wages (36.6 euros), was in the Financial and insurance activities, 72.6% higher than the average; relatively high hourly wages also characterised the sector of Arts, entertainment and recreation (34.8 euros), and Electricity, gas, steam and air conditioning supply (28 euros)

The wages and salaries per hour worked, as well as the hourly labour costs, increased with the increase in company size: there was a difference of over 7 euros per hour, from 16.6 to 24.1 euros between small companies (10-49 employees) and those with at least 1,000 employees. The gap was present in all macro-sectors, with the exception of Services of the business economy, and was more accentuated in Industry except construction and in Construction, the latter sector characterised by a very small number of large and very large economic units.

**FIGURE 6. AVERAGE GROSS WAGES PER HOUR WORKED; TOTAL AND PART-TIME EMPLOYEES**  
Year 2020. Wages in euro, share of employees in percentage value





### Wide differences in labour costs and wages at the geographical level

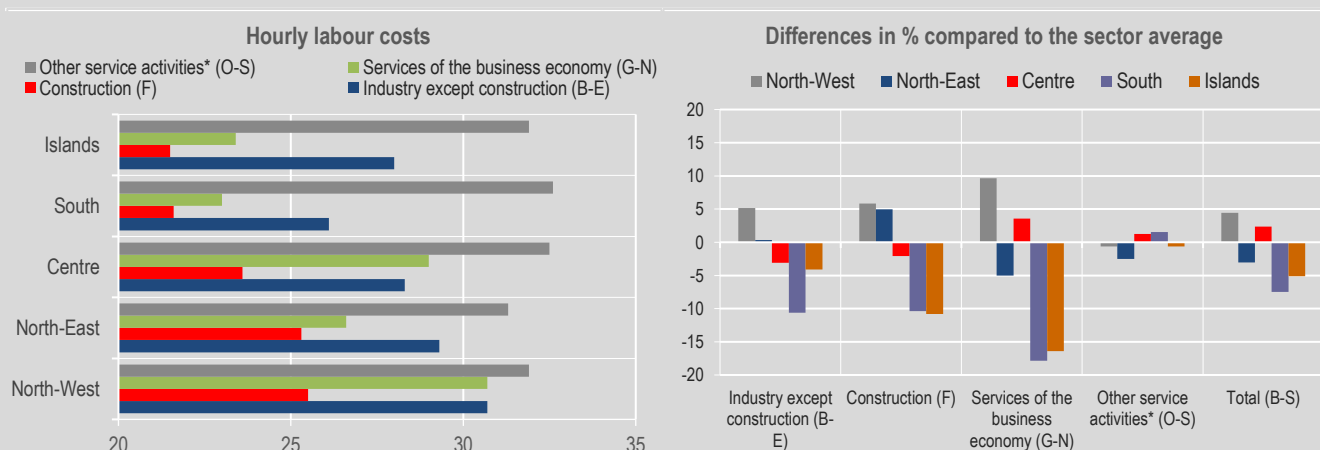
The geographical differences in hourly labour costs are also due to the effects of composition by size class and sector, particularly evident in terms of hourly wages (Figure 7).

In the North-West were recorded the highest hourly labour costs (30.7 euros), with values of over 2 euros higher than those of the South (27.2 euros), the Islands (27.9 euros), but also of the North-East (28.5 euros); in the Centre the labour costs were 30.1 euros. The Other services sector presented the higher hourly labour costs in all the geographic breakdowns, while the Constructions presented the lower one.

In the North-West hourly labour costs were above the national average in all economic sectors (Services of the business economy +9.6%; Construction +5.8%; Industry except construction +5.1%) but not in Other services (-0.6%) which was higher than the average in the Centre and South. Moreover in the South and in the Islands the hourly labour costs were lower than the sectorial average, in the Services of the business economy (respective -17.9% and -16.4%); in Industry except construction (-10.6% and -4.1%) and in Construction (-10.4% and -0.8%).

Gross hourly wages and salaries also showed significant geographical differences, with highest values in the North-West and the Centre (respectively, 22.1 and 21.7 euros) and higher than the national value respectively of 4.2% and 2.4%. The lowest levels were found in the South (19.7 euros, -7.1% compared to the national average), in the Islands (20.2 euros, -4.7%) and in the North-East (20.5 euros, -3.3%).

**FIGURE 7. LABOUR COSTS BY MACRO SECTOR OF ACTIVITY**  
Year 2020. Values in euro and percentage



\* Includes NACE Rev. 2 sections O to S, i.e. Public administration, defence, compulsory social security; Education; Human health & social work activities; Arts, entertainment & recreation and Other service activities.

### Labour costs and hours worked per capita decreased compared to 2016

The pandemic crisis in 2020 interrupted the growth of employee employment recorded in the years 2017-2019. However, thanks also to the suspension of redundancies and to the massive use of short-time working allowances (the Italian acronym is CIG), employment between 2016 and 2020 rose by 5% (employees involved in CIG were included among employees).

Growth was even more marked in the Business economy (+7.5%) and in the Industry and construction aggregate (+6.6%), with particular reference to the construction sector, which recorded an increase of 16.2%.

The not negligible use of the CIG caused a decrease of the hours worked for employee that, regarding 2016, was equal to 6.6%; the highest decreases were recorded in the Services of the business economy (- 9.2%) and in the Industry and construction aggregate (-8.9%).

In 2020, compared to 2016, labour costs per employee also decreased (-1.7%) while labour costs per hour worked increased (+5.3%). The largest deviations can be observed in the Accommodation and food service activities (-27.8% labour costs per employee and +10.5% labour costs per hour worked), in the Arts, entertainment and recreation activities (+8.7% and +35.3%) and in the Other service activities (-8.2% and +9.2%).

The difference between the per capita indicator and the hourly indicator was largely due to the sharp increase in the CIG: the sectors in which the gap between the two indicators was wider, were those showing the largest fall in per capita hours worked.

Compared to 2016, hours worked per employee decreased by 34.7% in the Accommodation and food service activities, 19.7% in the Arts, entertainment and recreation activities and 15.9% in Other services activities. In addition to the CIG, the change in the composition of employment also contributed to determine the gap between indicators per capita and per hour worked; in some sectors, for example, the growth of the part-timer has led to an increase in employment and a simultaneous decrease in per capita hours worked.

**FIGURE 8. EMPLOYEES AND HOURS WORKED; PER-CAPITA AND HOURLY LABOUR COSTS**

Years 2020 and 2016, percentage difference between averages on 2020 and 2016



\* Includes NACE Rev. 2 sections O to S, i.e. Public administration, defence, compulsory social security; Education; Human health & social work activities; Arts, entertainment & recreation and Other service activities.

## Wide differences in hourly labour costs among countries

The comparison in EU countries has been made using labour costs in the strict sense (excluding intermediate labour-related costs, cf. Glossary on p. 12) limited to the Industry and services sectors, excluding the NACE section "O" (Public administration, defence, compulsory social security) since in the EU Regulation the survey for this sector is optional and not all countries collect the data. The value of labour costs in the strict sense per hour worked was in 2020 28.3 euros in the EU27 average and 32.1 euros in the euro area (AE-19).

The differences between the Member States were very large: from 6.7 euros per hour in Bulgaria to 47.5 euros in Luxembourg. Italy, with hourly labour costs in the strict sense of 29.1 euros, was in 11th place within the 26 countries of the European Union (sorted in a decreasing way); the value was higher than the Spanish one but lower than those of France and Germany. Denmark and Belgium exceeded 40 euros per hour, while Romania and Hungary had values below 10 euros (Figure 9).

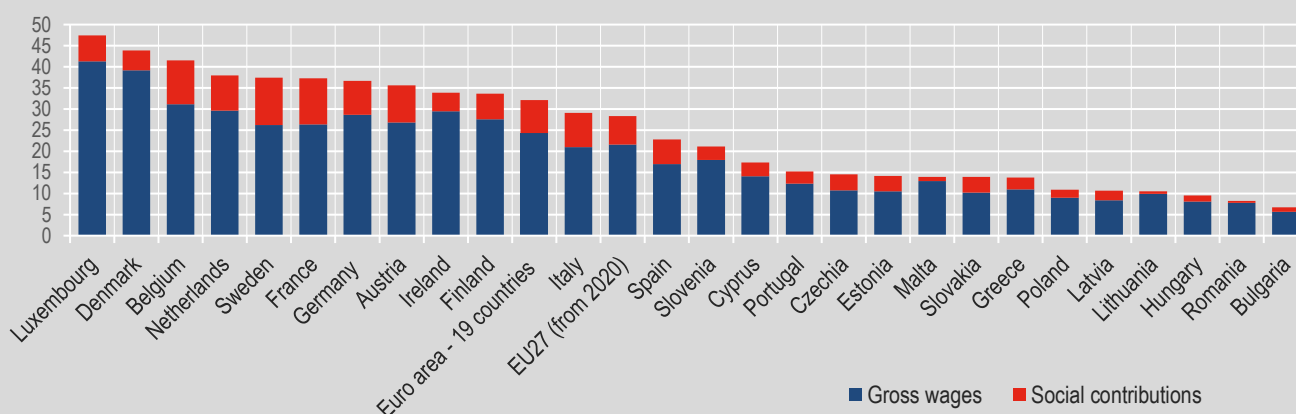
The lowest gross hourly wage was recorded in Bulgaria (5.7 euros) and Romania (7.8 euros), the highest in Luxembourg (41.3 euros) and Denmark (39.2 euros); Italy, with 21.0 euros, was again in 11th place.

Social security contributions per hour worked accounted for 23.7% of labour costs in the strict sense on average EU-27 and 24.3% in the euro area. Here, too, there were wide differences between Member States: Sweden was first (11.2 euros), Romania (0.5 euros) last, and Italy sixth (8.1 euros).

The share of social security contributions on labour costs also varied considerably from country to country, with a maximum value of 30.0% for Sweden and a minimum value of 5.5% for Romania. At 27.9%, Italy's share of contributions was only lower than those of Sweden and France (29.4%). The contribution weight was relatively low in Denmark (10.7%) and Luxembourg (13.1%).

**FIGURE 9. GROSS WAGES AND SOCIAL CONTRIBUTIONS PER HOUR WORKED IN EU COUNTRIES**

Year 2020. Values in euro\*



Source: Elaboration on Eurostat data (December 2022)

\* Data for Croatia are not available at the time of publication of this report

# Glossary

**Cash payments:** This includes all remuneration paid in cash and is equal to the sum of remuneration paid in each pay period, not paid in each pay period and remuneration for hours not worked but paid by the employer.

**Contractual working time:** It defines the employee's working time. It can be full-time or part-time. The part-time contract implies less annual hours than the contractual full-time one.

**Economic activity:** an activity that takes place when resources such as capital goods, labour, manufacturing techniques or intermediary products contribute to the production of goods or the provision of services. Within the European Union, the classification used of economic activities is the Statistical classification of economic activities in the European Community (NACE), in the version Nace Rev.2. The labour cost survey refers to NACE sections B to S, and in some analyses, to section aggregates.

**Employee:** All persons, who have a direct employment contract with the enterprise or local unit and receive remuneration, irrespective of the type of work performed, the number of hours worked (full-time or part-time) and the duration of the contract (fixed or indefinite). The following are to be considered as employees: executives, managers, clerks, workers, apprentice, members (also of cooperatives) for whom social security contributions are paid as employees, home workers registered in the single book of work, seasonal workers, workers with insertion contract. The number of employees also includes staff temporarily absent for various reasons such as vacations, leave, maternity leave, short-time working allowances.

**Gross wages and salaries:** Wages, salaries and fringe benefits, in cash and in kind. They include the values of any social contributions, income taxes, payable by the employee even if they are actually withheld by the employer and paid directly to social insurance schemes and tax authorities on behalf of the employee, in accordance with contracts, company agreements and applicable laws.

**Hours paid:** 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).

**Hours worked:** 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.

**Intermediate labour-related costs:** They include, in addition to professional training costs, personnel recruitment costs, excluding current administrative expenses, as well as the purchase of work clothes for employees. Also included are any employer sanctions for violation of labour relations regulations, while any subsidies received are deducted.

**Job position:** It is a unit of analysis defined as the employment relationship between an economic unit and a worker.

**Labour costs:** The total expenditure borne by employers in order to employ staff. Labour costs include compensation of employees with wages and salaries and employers' social contributions, vocational-training costs, other expenditures, taxes relating to employment regarded as labour costs, less any subsidies received.

**Labour costs in the strict sense/Compensation of employees:** Total compensation paid by an employer to an employee in return for work performed during the reference period. It includes wages and salaries, in cash or in kind, and employers' social contributions.

**Overtime hours:** Paid hours worked in addition to ordinary hours. Working hours on Sundays, nights or public holidays are considered as overtime only if they are not included in the working time under contract or stored overtime credit systems. They include supplementary hours from part-time workers that is for those hours worked beyond the hours originally agreed in the part-time contract.

**Payment in kind:** Payment not in cash. It includes: the value of meal vouchers or canteen meals, excluding meal replacement allowances, as these are cash payments; remuneration based on stock options and the transfer of shares free of charge or at a price below the market price; compensation in goods and services provided to employees (fringe benefits).

**Public Institution:** Legal-economic unit whose main function is to provide non-market goods and services and/or to redistribute income and wealth; their main resources are compulsory levies on households, enterprises and non-profit institutions or non-repayable transfers received from other general government institutions.

**Remuneration for hours not worked but paid by the employer:** Wages and salaries paid for holidays, holidays, leaves of absence and other paid absences established by law, by employment contracts or granted voluntarily. Wages paid for sickness, maternity and accidents, and wage subsidies for short-time work (CIG, solidarity) are excluded as they are counted as imputed social contributions for the purposes of the survey.

**Remuneration not paid in each pay period/non-recurring amounts:** All payments to employees that are not paid regularly in each pay period (weekly or monthly). They include bonuses and allowances paid in fixed or occasional periods and bonuses linked to individual and collective performance.

**Remuneration paid in each pay period:** Remuneration components paid in cash, payable in each pay period during the year, regardless of the variability of their amount. For most employees, the pay period is either weekly or monthly.

**Severance pay (TFR):** From a regulatory point of view, the payment of this element of remuneration is deferred until the termination of employment. The value measured refers to annual accruals, as well as payments to supplementary pension funds for the reference year only. For the purposes of the classification adopted, it is included in social security contributions.

**Size of enterprise:** In the present survey, it is defined according to the number of annual average employee positions in the Statistical register of active enterprises (ASIA imprese).

**Social contributions:** Employer's social contributions consist of the compulsory, contractual and voluntary payments that employers make to social security and welfare institutions, private insurance schemes, pension funds, and internal funds set up for the benefit of their employees. For the purposes of recognition, a distinction is made between actual (compulsory, voluntary) contributions, imputed contributions and severance pay (TFR). The severance indemnity for civil servants is included in the compulsory social contributions.

**Territorial statistical units (NUTS):** Geographical areas defined for statistical purposes as an aggregation of Italian regions. According to the first level of the Unified Territorial Nomenclature for Statistical Purposes (NUTS1), they are: North-West (Piedmont, Valle d'Aosta, Lombardy and Liguria), North-East (Bolzano/Bozen, Trento, Friuli-Venezia Giulia, Emilia-Romagna and Veneto), Centre (Tuscany, Lazio, Umbria and Marche), South (Abruzzo, Molise, Campania, Basilicata, Puglia and Calabria) and Islands (Sicily and Sardinia).

**Vocational training costs:** They include expenditure on services and equipment for vocational training. These costs are net of subsidies to employers related to vocational training and expenses for employees involved in different roles in training activities.

# Methodological note

The Labour Cost Survey, abbreviated as LCS, is conducted every four years in the EU Member States and it is based on the Council Regulation (EC) No 530/1999 concerning structural statistics on earnings and on labour costs and the Commission Regulation 1737/2005. The LCS allows to produce detailed information on the level and structure of labour cost data, hours worked and hours paid for employees in different sectors of economic activity in the European Union.

The target population is composed by all the enterprises and institutions belonging to the Private and Public sectors with at least 10 employees in the NACE Rev. 2 sections B to S. Since LCS 2012 edition, Italy provided also data related to section O (even if the extension to this section is still considered optional).

The statistical processes for the Private and Public sectors are quite different. For the Private sector, data from a direct statistical survey was combined in all significant phases of the process, with register data, the statistical process of the public sector is entirely Register based.

For further details:

[https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Labour\\_cost\\_survey\\_\(LCS\)](https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Labour_cost_survey_(LCS))

## The statistical process for the Private sector

The survey for the private sector is based on the RACLI (Italian acronym for Annual register on earnings, hours and labour cost for jobs and enterprises) wage register and the Business Register (ASIA) data, within the ISTAT Register System. In each stage of the survey data from RACLI register were used: in the sampling stage, allowing the reduction of the sample size; in the design of the questionnaire, facilitating a significant simplification through the elimination of variables available from registers; during the editing and imputation phases, where administrative data have been used as benchmarks, in the reconstruction of non-response and finally in the production of final estimates.

The process, therefore, is designed also taking into account the timing of the availability of the register. Following the scheduled availability of Social Security data, the RACLI register is available as a provisional version in the autumn of year  $t+1$  and, as a final version, in the spring of year  $t+2$ . So the provisional version was used for sampling, for prefilling the variables of the questionnaire and for checks during the data collection phase, while the final version was used for the post collection editing and imputation, including the imputation of non-responses, for calibration of the survey weights to known totals and for validation of the data.

For further details: <https://www.istat.it/it/archivio/264298>

## The sampling design

Sampling design of the LCS survey for the private sector is a one stage stratified random sampling. LCS sample strata are defined by the combination of the modality of the characters Nace Rev.2 divisions, 5 size classes (10-49 employees, 50-249, 250-499, 500-999, 1000 +) and 5 Nuts 1 level areas. The enterprises with at least 250 employees belong to *take all* strata and are selected with probability equal to 1 for a total of 647 take all strata of 1,395 in 2020 edition. In 2020, the sampled enterprises were 24,521.

## Questionnaire and Data Collection

The main purpose of the design of the LCS 2020 questionnaire was to exploit the administrative sources to increase data quality and reduce the statistical burden on respondents. In this regard, variables derived from the registers, able to satisfy the regulatory requirements, were not included in the questionnaire, while the core variables were pre-filled. The respondents could correct the pre-filled data if they noticed errors. They had also to compile the sub items to provide the information not available in the Register, e.g. occupation, detailed information on the components of remuneration and on overtime hours.

For the private sector, data have been gathered mainly through a Web-based questionnaire (CAWI), (Computer Assisted Web Interviewing) developed with ISTAT's GINO++ software.

Enterprises involved in the survey had to access the questionnaire via portal through user ID and password. Respondents could request assistance in filling in the questionnaire through toll-free number and other asynchronous channels managed by the Contact Centre. In order to allow the CC operators to properly manage the assistance, ISTAT experts gave them training on technical and thematic aspects of the survey. The most specific and complex requests that could not be solved by the CC were forwarded to ISTAT experts.

### Editing and imputation procedures

The overall design of the survey (sample, questionnaire and data collection) allowed to reach one of the highest response rates for this type of survey. With reference to the sample enterprises, the response rate reached almost 62%. Editing and imputation process has been carried out in several phases: an editing during data collection phase, a post - data collection editing and finally the imputation of missing data.

In the first stage, the input of data by employers were controlled by the rules in the survey questionnaire. The main rules, in addition to those of non-nullity and positivity, were related to the consistency between the main items, such as the hourly wages and salaries, the hours worked per employees, the share of social contributions on wages and salaries. The employer had the possibility to report exceptions through a special drop-down menu.

The post-collection check, with regard to quantitative variables, in addition to verifying compliance with the previous rules, added other deterministic ones by setting differentiated range for particular types of enterprises (i.e. enterprises with higher share of short-time working allowance or with a specific economic activities) and distinguishing criteria for the editing by specific group of variables. The main variables to be checked have been annual number of paid hours and employees, wages and non-wages variables, also referred only to the apprentices. Records violating one or more of the above rules were checked with probabilistic procedures via minimal distance donor (BANFF system, Statistics Canada).

Finally, data of non-respondent units (38% out of a total of 24,521) have been imputed by deriving the main variables from the RACLI register and imputing the remaining variables by means of a minimum distance donor identified taking into account the matching variables as those of annual average on paid hours and employees (distinguished by part-time, full-time and apprenticeship), and taxable wages and salaries.

### Calibration and sampling errors

The aim of such procedures is to adjust sampling weights in order to better represent the reference universe. The starting weights, derived from sampling, were adjusted so that estimates of some variables reproduce known totals for those variables. The variables used in calibration were the number of employees of ASIA 2020 and the amount of RACLI's wages for the same year.

The coefficient of variation for the estimate of average hourly labour costs, and the relative confidence interval, are presented in Table 2

**TABLE 2. AVERAGE HOURLY LABOUR COSTS COEFFICIENT OF VARIATION AND CONFIDENCE INTERVALS. Year 2020, euro**

	Total	Private Sector
Average hourly labour costs	29,4	27,8
Coefficient of variation (CV)	0,00048	0,00051
Margin of error	( Mean x Cv) x1,96 =	
Lower bound	29,37	27,77
Upper bound	29,43	27,83

Source: Istat, RCL-LCS Year 2020

### The statistical process for the Public sector

The statistical process of the public sector is entirely Register based. It is founded on two statistical registers, the Labour Register (LR) and the Register of Public Institutions and an administrative source, the Annual Account of the Ministry of Economy and Finance.

The frame list is derived from the institutions of the Register of Public institutions and the Labour Register. The final list of LCS 2020 was composed by 17,803 institutions with 3,382,124 employees.

## Data sources

The statistical unit of the Labour Register is the job position, that is, for the employees, the employment relationship between an economic unit (the employer) and an individual (the worker) also identified by an activation date.

The LR for the public sector is fed by 5 main administrative sources: 1) the individual social contribution declarations that every month public institutions transmit to INPS through the PosPa List section of the Uniemens (ex-Inpdap source); 2) the individual monthly payslips compiled by the NOIPA system of the Ministry of Economy and Finance (MEF) for the administrations that have joined the system (IGOP source); the contribution declarations that the economic units of the public sector transmit to the INPS through the section Poslav List of the Uniemens divided into those produced: 3) by the MEF Data Processing Centre, as a withholding agent, for employees, mainly temporary, of some ministries (source CedInps) and 4) from all other withholding agents of the public perimeter that for administrative reasons use the section Poslav List as private sector enterprises (source Private); 5) the yearly tax declarations (source CU).

These sources, after data treatments aimed at eliminating duplications and harmonizing them, are integrated into a single database, with monthly information for each job position. In this phase an important role is played by the information taken from the Matrix of links between administrative units and institutional units produced within the operations for the Register of Public Institutions.

At this level the Register contains information on the characteristics of the job position (national collective agreement –NCA-, job title, type of working time, percentage of part-time, type of contract), on the labour input, measured as the average number of monthly positions, and the number of hours paid net of overtime. The number of overtime hours is estimated a) for the job positions covered by the IGOP source, using the wages for overtime hours, contained in this source, and the average hourly overtime rates from the collective agreements and the Annual Account and b) for the rest of the population of job positions with a massive imputation method that uses information from the Labour Force Survey.

The Annual Account is a takes-all survey carried out by the Ministry of Economics and Finance - General Accounting (RGS) to measure the personnel costs of public institutions. The data of the Annual Accounts, have been suitably studied, analysed, and reclassified to produce data that fit the definitions of Labour Cost Survey regulation (Commission Implementing Regulation 1737/2005).

Finally, for a very limited number of units the data were collected through the questionnaire built for the private sector. These are units that only recently passed from the population belonging to the private sector (as defined by the Business Register Asia) to the one belonging to the public sector and in particular in the list S13. These units are not yet covered by the Annual Account and are broadly similar, in many respects, to private sector units.

## Data Processing

The data processing for the public sector consists in the construction of a takes-all database on public sector units with the variables required by the LCS regulation. The processing steps can be summarized as follows. First, LR data on labour inputs and paid hours, broken down by type of working time, and wages are aggregated by legal unit, NCA code, job title code. The second phase is to group from the Annual Account data on hours of absence, wages, contributions and other labour costs (according to the LCS classification) by institutional unit, NCA code, job title code. In the third stage, the information of this second database is used to impute the LCS missing variables in the first database, at legal unit, NCA code, job title code. In the fourth phase, the data are aggregated at the legal unit level and the classification variables, such as the economic activity and the territorial location, derived from the Register of Public Institutions and the Matrix of links between administrative units and institutional units, are added to the data. At this stage, in relation to the Ministry of Education, University and Research (MIUR), Educational and Training Institutions are classified in Section P of the NACE (Education), while the rest of the Ministry is classified in Section O (Public administration and defence; compulsory social security). In the last step, the data are subjected to editing and imputation procedures that adopt the same techniques and software used for private sector data.



## NOTE

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<sup>i</sup> Private services (G-N) account for 40.3% of total employment while Other services (O-S, including public administration) account for 31.6%. As regards the working-time regime, a total of 19.4% of part-time employees is recorded, with an incidence of 23.7% in Services and 8.5% in Industry; in the public sector the share is 8%, while in the private sector it is 23.7%.

<sup>ii</sup> In this statistical report we always refer to the employer's social contributions, even when called social contributions.

<sup>iii</sup> Due to rounding of ratios per employee the totals may not coincide with the sum of the addenda.

<sup>iv</sup> The administrative sources on which the registers are based do not count the hours that teachers work outside school.

## For technical and methodological clarifications

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