

October - December 2022

CONTRACTUAL WAGES AND SALARIES

- The index of wages according to the national collective bargaining agreement measures the evolution of wages and salaries (per employee or per hour) determined by contractual provisions set by collective agreements; the indices are calculated with reference to the fixed employment structure of the base period (December 2015).
- At the end of December 2022 the coverage rate (share of national collective agreements in force for the wage setting aspects) concerns 50.7% of employees - about 6.2 million - and 51.2% of the total amount of wages.
- In December 2022 the hourly and the per employee indices increased by 0.1 from the previous month.
- Compared with December 2021 the hourly and the per employee indices increased by 1.5%.
- On average in 2022, both indices grew by 1.1% compared to 2021.

CHART 1. INDEX OF WAGES PER HOUR ACCORDING TO COLLECTIVE AGREEMENTS

January 2015 – December 2022 (Index, December 2015=100)

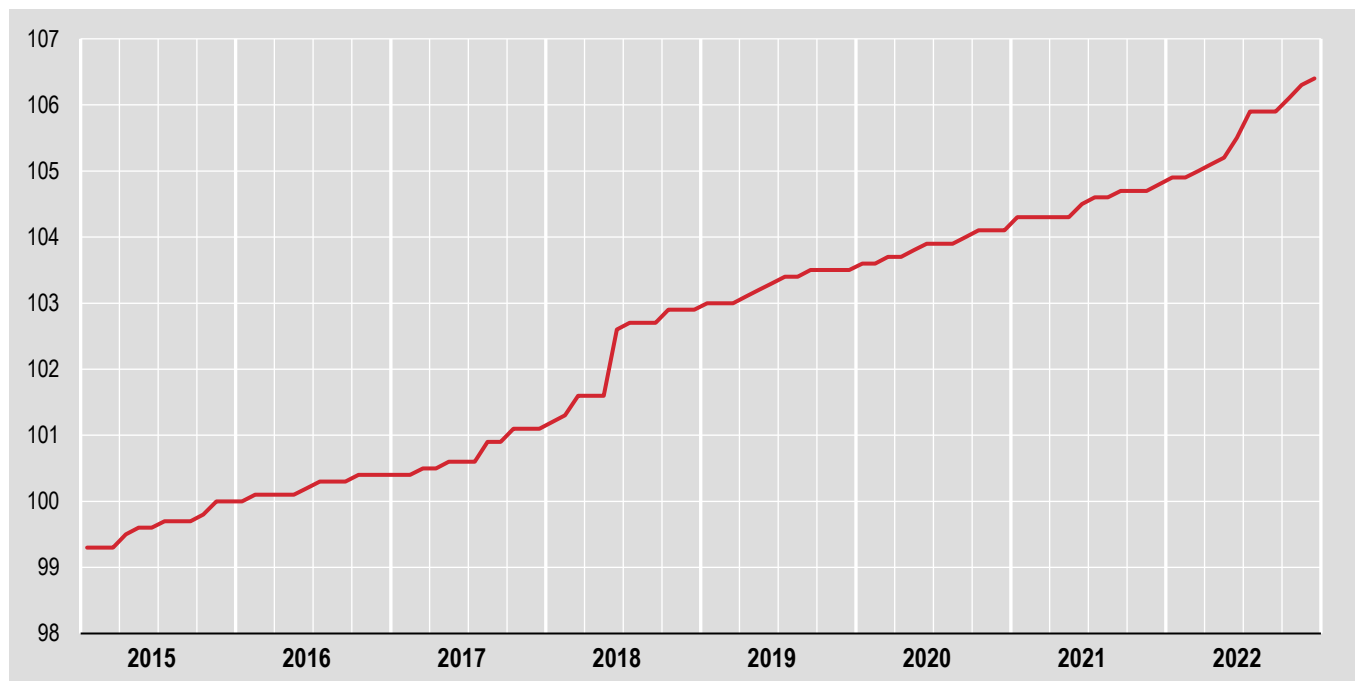


CHART 2. WAGES PER HOUR ACCORDING TO COLLECTIVE AGREEMENTS

January 2015-December 2022 (Index, December 2015=100), month on previous month, month on same month a year ago percentage changes and annual average changes



CHART 3. WAGES PER HOUR ACCORDING TO COLLECTIVE AGREEMENTS, BY ECONOMIC SECTOR

January 2015-December 2022, month on same month a year ago percentage changes (Index, December 2015=100)

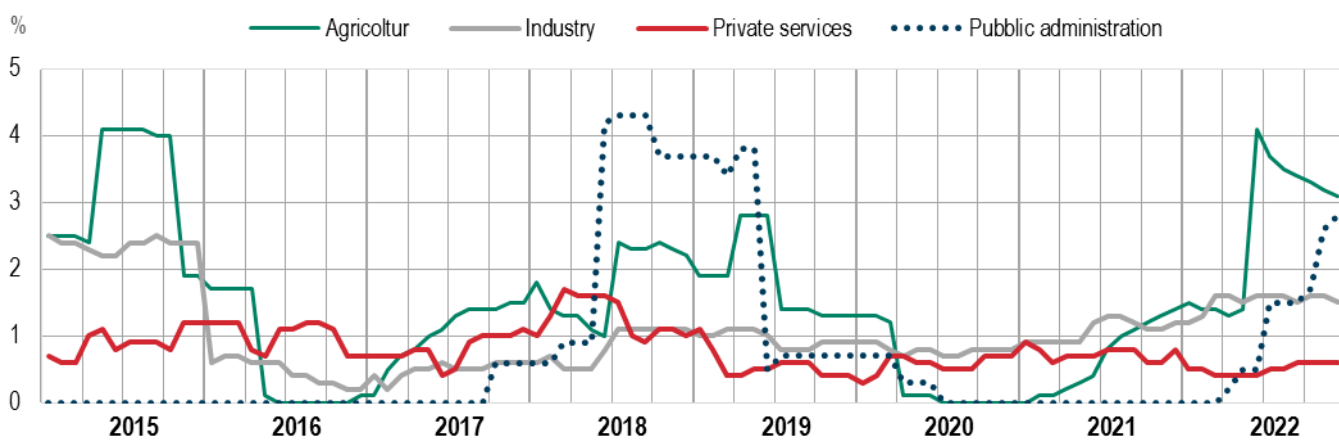


TABLE 1. WAGES PER HOUR AND PER EMPLOYEE ACCORDING TO COLLECTIVE AGREEMENT

October - December 2022, indices, month on previous month and on same month a year ago percentage changes (Index, December 2015=100)

	Index (December 2015=100)			Month on previous month percentage changes			Month on same month a year ago percentage changes			
	Oct	Nov	Dec	Oct 22 Sep 22	Nov 22 Oct 22	Dec 22 Nov 22	Oct 22 Oct 21	Nov 22 Nov 21	Dec 22 Dec 21	2022 2021
Wages according to collective agreements per hour	106.1	106.3	106.4	+ 0.2	+0.2	+0.1	+1.3	+1.3	+1.5	+1.1
Wages according to collective agreements per employee	106.1	106.4	106.5	+0.1	+0.3	+0.1	+1.2	+1.5	+1.5	+1.1

CHART 4. BARGAINING TENSION INDICATORS. EMPLOYEES AWAITING RENEWAL, TOTAL AND PRIVATE SECTOR

January 2015-December 2022, percentage values

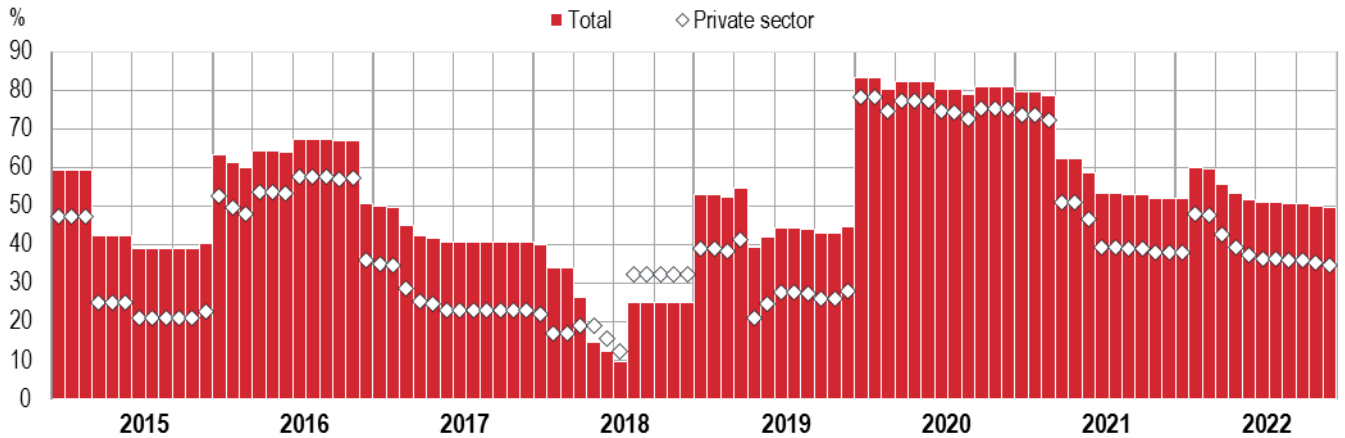
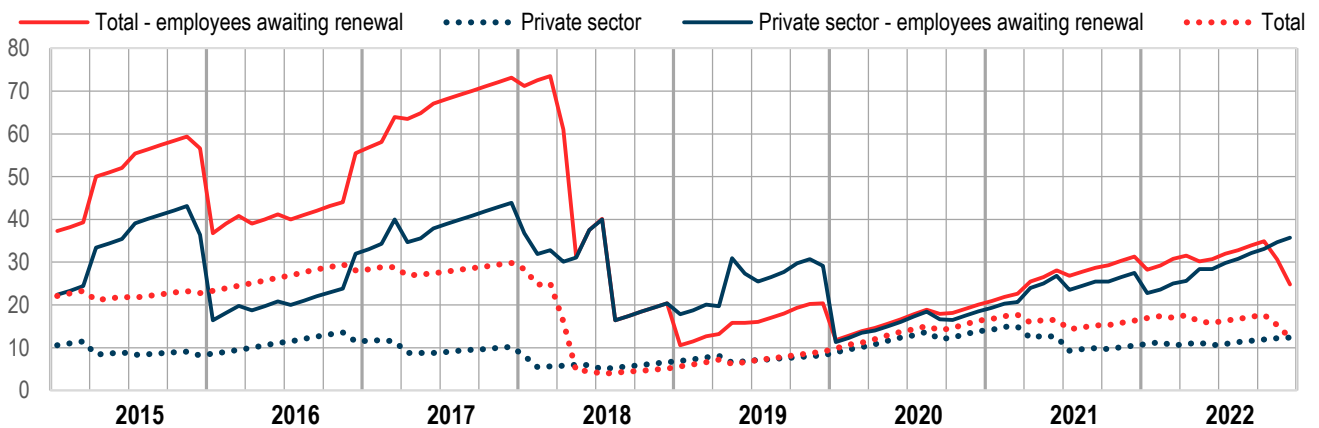


CHART 5. BARGAINING TENSION INDICATORS. AVERAGE NUMBER OF MONTHS PASSED FROM THE EXPIRATION DATE, TOTAL AND PRIVATE SECTOR

January 2015-December 2022



Contractual length of work: hours of work to be worked, according to the collective agreements, by full time employees, net of those paid but not worked, for holidays, work permits (annual work reduction, abolished public holidays, study, union assembly).

Employee: Employees (full time equivalent), excluding apprentices and managers, whose compensations are ruled by the national collective bargaining agreement in sectors.

Employees awaiting renewal: the share of employees covered by collective agreements expired.

National Collective bargaining agreement: written contract negotiated through employers' association and trade unions that regulates the terms and conditions of employees at work.

The index numbers of the contractual wages per employee provide a measure of the variations of remunerations due, over the course of a year, to the employed worker on the basis of the contents of the national labour contract and the legislation in force. The indices of the contractual remunerations per employees are based on the equivalent work units (EWU), namely full and part-time employees reported to work units, without considering any deduction for any absences, nor other reasons that justify a reduction of the remuneration provided by contract.

The index of the hourly contractual remunerations: is obtained as the ratio between each elementary index of the remunerations and the corresponding index of the contractual length of work, measures monthly the variations of the contractual remunerations to pay to employees for each hour of work contractually performed.

Wages according to collective agreement: contractual wages calculated as one twelfth of annual wages and salaries on the basis of the national collective labour agreements. The accounted components 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.

Introduction and regulatory framework

The contractual wages and salaries and working hours data are taken from national collective bargaining agreements, or from laws and regulations that govern the topic.

It is necessary, however, to remember that the index of the contractual wages and salaries has purely national characteristics, and it's not included among those subject to European Regulation. In addition to being the most timely indicator of the evolution of wages and salaries, it assumes particular importance because it is the basis of numerous legislative provisions (and not) for the adjustment of wages and salaries, pension and fee amounts to specific categories of employees and services.

Index reference base

The series of the indices use December 2015 as the reference base. The choice to refer the base to a month (rather than a year), is linked to the indicator characteristics, which does not present seasonal components because it refers to annual remuneration. Year 2015 was chosen, analogously to that established for the other short-term indicators by the European Regulation on short-term statistics. The new series of indices of contractual remunerations are calculated starting from January 2015; therefore, these indices replace, from January 2015 to December 2018, the previously indices published in base 2010. Starting from January 2019, the new series of indices are appropriate to produce the legal effects that the laws in force reconnect to specific indicators calculated by Istat.

Observation field: information sources and acquisition methods

To determinate the monthly index, the survey follows the evolution of the gross remunerations and work hours for all the employment categories involved, except apprentices and managers.

In total, there are 73 national collective bargaining agreements monitored by the survey, while there were 78 for the base 2010 (Table 1). The difference of the number of agreements is due to the merging of the previously distinct contracts (the mobility - contractual area of railway activities contract that includes also the contracting services companies from the railways; the maritime transport contract that includes the ship's crew section and administrative staff; the air transport contract that join together pilots, flight crew and ground staff).

National agreements monitored in the private sector are 58 while totally national contracts are about 280¹. For the agriculture and construction sectors, provincial contracts are also considered, whose clauses give rise to a remuneration that integrates national remuneration.

In the public sector, the agreements already monitored have been confirmed. Researchers and technologists are also included in the research institute sector. This employees represent 96.3% of totally public sector.

The contractual remuneration treatment regards 2,855 specific professional profiles (Table 1), characterised by qualification and level of employment. This professional profiles have a different remuneration fixed by the collective contracts.

The total profiles are 2,940, of these 1,418 are defined by national contracts (95 relative to public managers who are not included in the monthly index calculation) and 1,522 are fixed by territorial agreements (1,123 for agriculture and 399 for construction).

For each economic activity sector, the national collective bargaining agreements considered are the most representative for the number of employees respect to the other contracts of the same sector. As consequence the leader contracts dynamic is attributed to the group of employees belonging to contracts represented by them.

¹For the number of agreements, refer to INPS Circular 24/04/2015 that updates the Circular Inps 03/05/1999 n°100.

TABLE 1. CONTRACTUAL WAGES. YEAR 2015.

Contracts, employees, distribution of the remuneration and number of employees.

MAIN CONTRACT GROUPINGS	CCNL	Employees	Remuneration (%)	Number of profiles		
				Blue collars	White collars	Total
Agriculture	2	326,913	1.90	991	132	1,123
Industry	24	4,179,655	34.19	623	316	939
Private services	32	5,032,302	39.53	171	295	466
Total private sector	58	9,538,302	75.62	1,785	743	2,528
Public Administration	15	2,825,142	24.38	-	327	327
Total monthly index	73	12,364,012	100.00	1,785	1,070	2,855
Public Administration managers under contract	9	157,375	-	-	44	44
Public Administration managers not under contract	5	90,809	-	-	41	41
Total	87	12,612,196	-	-	1,155	2,940

The reference employment structure

The reference population is represented by employees: white collars, blue collars and middle managers. The estimate of the number of jobs to which attribute the remuneration dynamic, is derived from several archives.

The agricultural sector

For the agricultural sector, the number of white collars was calculated directly from the Emens archive, while for the blue collars, the data used was taken from the quarterly declaration module (DMAG module) that the farms must send to INPS (National Social Security Institution) for the survey of the employed labour force. This information has also allowed to determinate the number of temporary and permanent workers. The temporary employees, infact, has wages tables different from permanent workers.

The extra-agricultural private sector

The estimate of the number of jobs full-time for the extra-agricultural private sector is calculated from RACLI (Annual register on earnings, working hours and labour cost for persons and enterprises), based on UniEmens models. This information is integrated with the economic activity presents in ASIA (archive of active company).

The analysis have generally been conducted at group level of Ateco, but for particular situations, they have also extended to the class level.

For the construction sector, information taken from the administrative archives of the Building Security Institutions was used to produce indices at provincial level.

Public Administration

In the public sector the number of employees referring to the "Conto Annuale" of the State General Accounting Department on the date of 31 December 2015.

Particular Ateco groups

As in the previous base, some group Ateco are not represented. The exclusion occurred when more than 50% of employees are regulated by agreements not included in the group considered. For particular Ateco, under the 50%, the class level has been analysed to decide to include them or not (Table 2).

TABLE 2. GROUP AND CLASS ATECO EXCLUDED BY SURVEY
Years 2010 and 2015

GROUP/CLASS OF ECONOMIC ACTIVITY		Presence	
		2010	2015
031	Fishing	not present	NOT
032	Aquaculture	NOT	YES
051	Mining of hard coal	present	NOT
107	Manufacture of bakery and farinaceous products	NOT	YES
1071	<i>Manufacture of bread; manufacture of fresh pastry goods and cakes</i>	YES	NOT
1072	<i>Manufacture of rusks and biscuits; manufacture of preserved pastry goods and cakes</i>	YES	NOT
1073	<i>Manufacture of macaroni, noodles, couscous and similar farinaceous products</i>	YES	NOT
182	Manufacture of cocoa, chocolate and sugar confectionery	NOT	YES
321	Manufacture of jewellery, bijouterie and related articles	NOT	NOT
325	Manufacture of medical and dental instruments and supplies	NOT	white collars
477	Retail sale of other goods in specialised stores	NOT	YES
4771	<i>Retail sale of clothing in specialised stores</i>	YES	NOT
4772	<i>Retail sale of footwear and leather goods in specialised stores</i>	YES	NOT
4773	<i>Dispensing chemist in specialised stores</i>	NOT	NOT
4774	<i>Retail sale of medical and orthopaedic goods in specialised stores</i>	YES	NOT
4775	<i>Retail sale of cosmetic and toilet articles in specialised stores</i>	YES	NOT
4776	<i>Retail sale of flowers, plants, seeds, fertilisers, pet animals and pet food in specialised stores</i>	YES	NOT
4777	<i>Retail sale of watches and jewellery in specialised stores</i>	YES	NOT
4778	<i>Other retail sale of new goods in specialised stores</i>	YES	NOT
4779	<i>Retail sale of second-hand goods in stores</i>	YES	NOT
591	Motion picture, video and television programme activities	NOT	YES
592	Sound recording and music publishing activities	NOT	white collars
643	Trusts, funds and similar financial entities	YES	NOT
653	Pension funding	YES	NOT
662	Activities auxiliary to insurance and pension funding	YES	NOT
683	Real estate activities on a fee or contract basis	NOT	YES
742	Photographic activities	NOT	white collars
781	Activities of employment placement agencies	YES	white collars
782	Temporary employment agency activities	NOT	NOT
900	Performing arts	NOT	blue collars
931	Operation of sports facilities	NOT	NOT
941	Activities of business and employers membership organisations	YES	NOT
942	Activities of trade unions	YES	NOT
949	Activities of other membership organisations	YES	NOT
960	Other personal service activities	NOT	NOT
9601	<i>Washing and (dry-)cleaning of textile and fur products</i>	YES	YES
9602	<i>Hairdressing and other beauty treatment</i>	NOT	NOT
9603	<i>Funeral and related activities</i>	NOT	NOT
9604	<i>Physical well-being activities</i>	NOT	NOT
9609	<i>Other personal service activities n.e.c.</i>	YES	YES
970	Activities of households as employers of domestic personnel	NOT	NOT
982	Undifferentiated service-producing activities of private households for own use	NOT	NOT
990	Activities of extraterritorial organisations and bodies	NOT	NOT

Contractual elements considered in the monthly indices

For each of the categories of employees provided by national collective bargaining agreements observed by the survey, the annual per capita remuneration is calculated on the basis of the values in force.

The survey considers the remuneration elements having a general and continuous feature, including the additional monthly payments and other amounts paid only in some periods of the year; occasional bonuses are excluded, overtime work and emoluments established by decentralised agreements and arrears and lump sum payments. The remuneration elements are presented in Table 3.

The following elements are common to all the sectors: base pay, contingency allowance and distinct element of the remuneration; with regard to the other elements, the remuneration structure varies from sector to sector.

The annual duration of the work is made up of a number of hours due by contract in the year, net of hours paid, but not worked, for vacations, holidays and paid leaves established by the agreements. The elements considered for the calculation of the annual duration are:

1. weekly contractual hours;
2. vacations;
3. mid-week holidays and recovery of cancelled holidays;
4. hours of assembly;
5. hours of study;
6. hours reduced from the annual amount, used as paid leave.

TABLE 3. ELEMENTS OF REMUNERATION CONSIDERED IN THE INDICATORS

1	Base pay (minimum wage)
2	Cost of living allowance (the amounts are fixed at the levels achieved in November 1991; there are many sectors in which the bargaining has provided the pooling of the base pay)
3	Seniority-linked bonuses (included in the calculation of the indices with reference, generally, to an average seniority fixed at 8 years)
4	Shift work remuneration (in sectors in which the size of the phenomena is noteworthy)
5	Remuneration for particular activity (connected to the inconvenience or danger, in sectors in which it is possible to estimate an adequate amount with reference to particular "contractual figures")
6	Any bonuses
7	Distinct element of pay (EDR)
8	Advances and allowances of contractual vacation
9	<i>Ad personam</i> cheques (generally determined at the time of "reclassification" operations) provided by a new national contract regulation
A	Monthly wages (sum of items from 1 to 9)
10	Share of paid holidays
11	Share of the 13th month of salary
12	Share of the 14th month salary and of any other additional salary months
13	Share of any other establishments of annual character
B	Total on monthly base of the accruals of the annual amounts divided into months (sum of items from 10 to 13)
A+B	Wages divided into months (sum of items from 1 to 13)

Characteristics of the indicators

The monthly indicator of "contractual wages" is determined from national collective bargaining agreements. The indicator refers to a concept of "price" of the performance of employed work, different from the total wages because it refers to a constant group of workers, and characterised by a fixed composition by qualification, class of employee and average seniority. The index of contractual remuneration is not affected by changes in employee composition, by the amount of hours actually worked and by the payment of specific non-continuous remunerations (arrears, lump sum, etc.).

The index of the contractual wages per employee measures the variations of remuneration to be paid to the employed workers, in a year, on the basis of the national agreement and the legislation in force. The remuneration is calculated as one twelfth of the remuneration due over the entire year. The indices of the contractual remunerations per employees are based on the equivalent work units (EWU), namely full time and part-time employees reported to work units, without considering any deduction for absences or other reductions of hour not remunerated.

The index of the contractual length of work measures the variations of the quantity of work that is requested by contract. For each class of employee, the index is based on the number of hours required by contract over the entire year, less the hours paid but not worked for vacation, holidays and other paid leaves established by the agreements.

The index of the hourly contractual remunerations is obtained as the ratio between elementary index of the remunerations and the corresponding index of the length of work. This index measures monthly the variations of the contractual remunerations to pay to employees for each hour of work contractually performed.

The “elementary index” (referred to a level of contractual classification, separately for blue collars and white collars), is calculated as a ratio between the remuneration of a specific month and the remuneration of the reference period base (December 2015).

$${}_n i_j^t = \frac{{}_n r_j^t}{{}_n r_j^o}$$

where n is a specific agreement, j is a level of classification of contract, ${}_n r_j^t$ is the remuneration at t time and ${}_n r_j^o$ is period base remuneration.

The elementary indices are aggregate to obtain average index for class level (blue collar, white collera and total), for agreements and for sector until the general index (total economy).

Lapseyres index is used to aggregate the elementary indices.

$${}_n I^t = \frac{\sum_{j=1}^J {}_n i_j^t * {}_n R_j^o}{\sum_{j=1}^J {}_n R_j^o}$$

where ${}_n R_j^o$ is the production between ${}_n r_j^o$ and ${}_n e_j^o$ (employees referred to december 2015).

The index projections The press release presents a projection of the indices of wages for the six months following the reference month. The index projections are based on contractual increases fixed by agreements. The accuracy depends on the share of employees with contracts in full force.

Contractual tension indicators. The survey estimates three contractual tension indicators.

- 1- share of employees with agreements not in force;
- 2- number of months following the expire date of contract for only employees awaiting renewal;
- 3- number of months following the expire date of contract for all the employees.

The weighting system

For each sector the contractual wages and salaries indices are summarised through a weighting system that assigns each aggregate a weight equal to the incidence of the relative remuneration respect to the total sector. The remuneration derives from the product between the number of employees for each sector and the average contractual remuneration.

In Table 4, the weighting system used for the construction of the indices on the 2015 base is compared with the system used for 2010 base.

TABLE 4. INDICES OF THE CONTRACTUAL REMUNERATIONS WEIGHTING STRUCTURE AND NUMBER OF EMPLOYEES FOR THE CONTRACT SECTORS OBSERVED. Comparison between the weighting structures of the year 2010 and 2015.

	Year 2010		Year 2015	
	Employees	Weight on the wages amount (a)	Employees	Weight on the wages amount (a)
AGRICULTURE	347,611	1.80	326,913	1.90
INDUSTRY	4,616,503	33.94	4,179,655	34.19
Mining and quarrying	15,503	0.17	17,342	0.22
Food and beverages	252,988	1.97	252,402	2.17
Textiles, clothing and leather processing	378,233	2.37	364,250	2.53
Wood, paper and print	360,032	2.50	315,968	2.43
Energy and petroleum	25,124	0.29	22,087	0.28
Chemicals	204,440	1.62	208,397	1.84
Rubber, plastic and processing of non-metallic minerals	331,159	2.33	297,864	2.37
Metalworking industry	2,191,517	15.88	2,063,123	16.83
Electrical energy and gas	80,895	0.77	68,810	0.73
Water and waste removal services	137,036	1.18	134,032	1.22
Building	639,576	4.86	435,380	3.57
PRIVATE SERVICES (c)	5,008,944	37.25	5,032,302	39.53
Commerce	1,947,282	14.13	1,902,364	14.80
Private Pharmacies	-	-	46,134	0.40
Transports, postal services and connected activities	837,913	6.67	825,915	6.96
Restaurants and hotels	634,521	4.04	604,402	4.07
Information and communications services	37,984	0.42	37,114	0.43
Telecommunications	104,676	0.77	108,439	0.88
Credit and insurance	415,226	4.78	399,267	4.88
Other private services	1,031,342	6.43	1,108,667	7.11
TOTAL PRIVATE SECTOR	9,973,058	72.99	9,538,870	75.62
PUBLIC ADMINISTRATION ACTIVITIES	2,915,224	27.01	2,825,142	24.38
Collective bargaining sectors	2,437,967	21.94	2,361,264	19.74
Of which Ministries	166,557	1.37	145,535	1.20
Regional and local authorities	513,432	3.92	449,889	3.39
National Health Service	557,649	5.03	528,788	4.38
School	1,026,272	10.04	1,062,575	9.14
Police Forces	314,002	3.44	298,176	3.07
Military - Defense	129,848	1.35	131,474	1.28
Fire-fighting activities	33,407	0.28	34,228	0.29
Total economy	12,888,282	100.00	12,364,012	100.00

(a) Incidence of the contractual wages on the contracts by branch and sector of economic activity on the total economy.

Timeliness

The contractual wages indices are disseminated at the end of the month following the reference month.

Revisions

The published data are not subject to revision.

Issue

The indices are published monthly on the [Istat data warehouse](#) and quarterly with a [press release](#).

The wages and salaries indices are calculated according: a) contracts and contract groups; b) economic activity on the basis of the Ateco 2007 classification,

In the quarterly press release the contractual wages indices are published by contracts and contract groups.

In the datawarehouse I.stat (<http://www.dati.istat.it>), the indices are available monthly by contract and by economic activity (Nace Rev. 2).