



10 November 2022
GROSS MONTHLY EARNINGS PER EMPLOYEE
September 2022

GROSS MONTHLY EARNINGS PER EMPLOYEE INCREASED BY 4.0%, TO €1,353, IN THE 3RD QUARTER OF 2022; IN REAL TERMS, THEY DECREASED BY 4.7%

The total gross monthly earnings per employee (per job¹) increased by 4.0% in the quarter ended in September 2022 (3rd quarter of the year), compared to the same period of 2021, to €1,353. The regular and the base components of those earnings increased by 3.8% and 3.7%, reaching €1,145 and €1,076, respectively. In real terms, considering the Consumer Price Index change, the total gross earnings decreased by 4.7%, while both the regular and the base monthly earnings decreased by 4.9%. These results cover 4.5 million jobs, corresponding to Social Security beneficiaries and to *Caixa Geral de Aposentações* subscribers.

Compared to September 2021, the largest increases in total gross earnings were observed in the activities of Education (section P; 7.1%), in enterprises of 1 to 4 employees (6.6%), in the private sector (4.9%), and in enterprises in High-technology services (6.4%). There were no decreases in total earnings and the lowest year-on-year changes were observed in the Public administration and defence; compulsory social security (section O; 0.5%), in enterprises of 500 employees or over (1.8%), in the Public sector (2.0%) and in the Financial and insurance activities (0.8%).

1. Gross monthly earnings per employee and by earnings components

In September² 2022, the total gross monthly earnings per employee increased by 4.0% (Figure 1), from €1,302 in September 2021 to €1,353 one year after. This change is higher than the one observed in June 2022 by 0.7 percentage points (pp).

The regular gross monthly earnings per employee exclude, among other earnings components, the Christmas and Holidays allowances and, thus, have a less seasonal behaviour³. In September 2022, it stood at €1,145, while in September 2021 it had been €1,104, corresponding to an increase of 3.8%. This growth was 1.4 pp higher than in June 2022.

¹ Each employee is counted as many times as the number of jobs reported to the Social Security and to CGA (*Caixa Geral de Aposentações*), thus the total of employees corresponds to the total of jobs. For more details, see the Technical Note in annex.

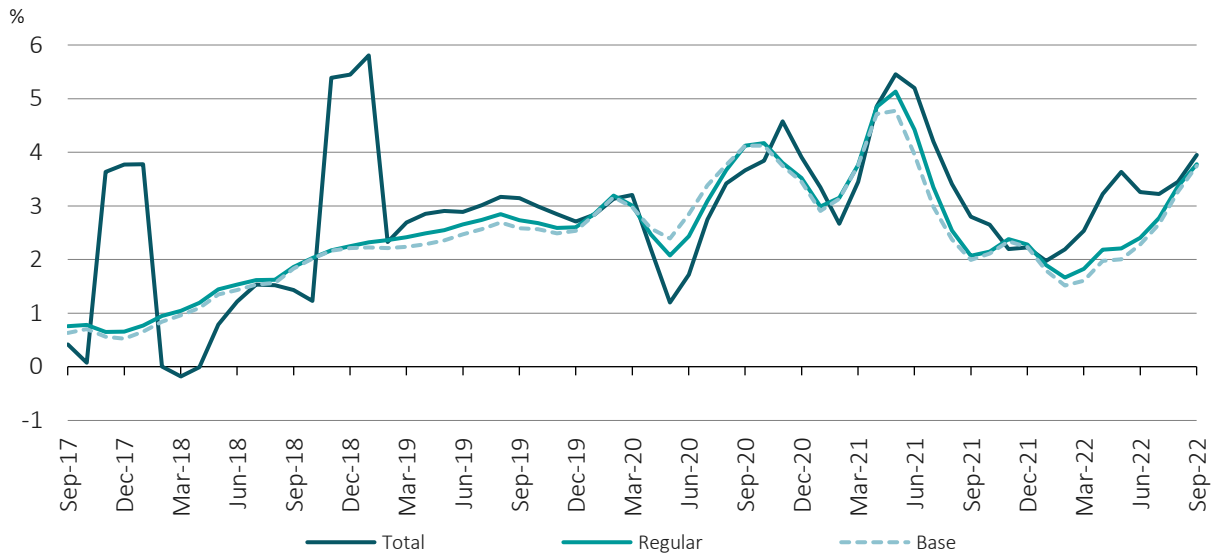
² The monthly data analysed in this Press Release refer to moving quarters ended in the reference month (for example, the September 2022 estimate corresponds to the 3rd quarter of 2022), and the series starts in March 2014. The last three reference months are subject to regular revisions as stated in the Technical Note.

³ For a more detail description of the earnings components included in the total and in the regular earnings, see the Technical Note.



The base⁴ gross monthly earnings per employee increased by 3.7%, from €1,037 in September 2021 to €1,076 in September 2022. This change was higher than the one observed in June 2022 (up 1.5 pp).

Figure 1. Year-on-year change of gross monthly earnings per employee (total and regular)



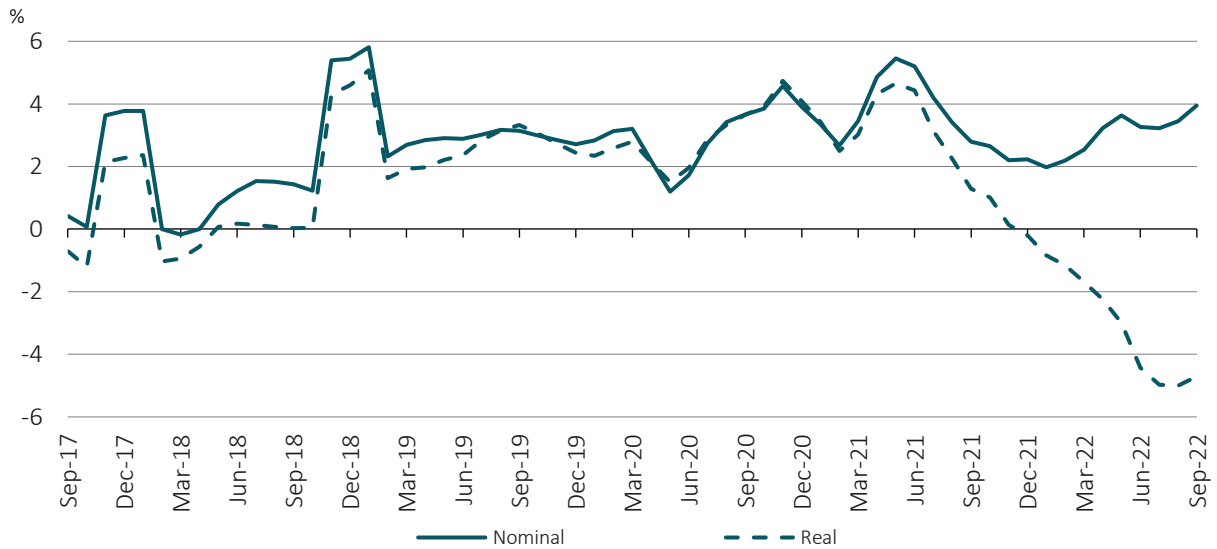
Note: The significant fluctuations registered in the end of 2017 and 2018 were due to the changes in the payment of the Christmas allowances in the public sector (50% in November 2017, 100% in November 2018), whereas in the previous years they were paid in one-twelfth over the year.

Adjusting for the inflation measured by the Consumer Price Index (CPI) rate of change, which was 9.1% in the quarter ended in September 2022, the year-on-year real rates of change of the gross earnings (total, regular and base) were -4.7%, -4.9%, and -4.9% (Figures 2, 3 and 4).

⁴ For more information about the differences between the earnings components, see the Technical Note.



Figure 2. Year-on-year change of total gross monthly earnings per employee (nominal and real)



Note: The significant fluctuations registered in the end of 2017 and 2018 were due to the changes in the payment of the Christmas allowances in the public sector (50% in November 2017, 100% in November 2018), whereas in the previous years they were paid in one-twelfth over the year.

Figure 3. Year-on-year change of regular gross monthly earnings per employee (nominal and real)

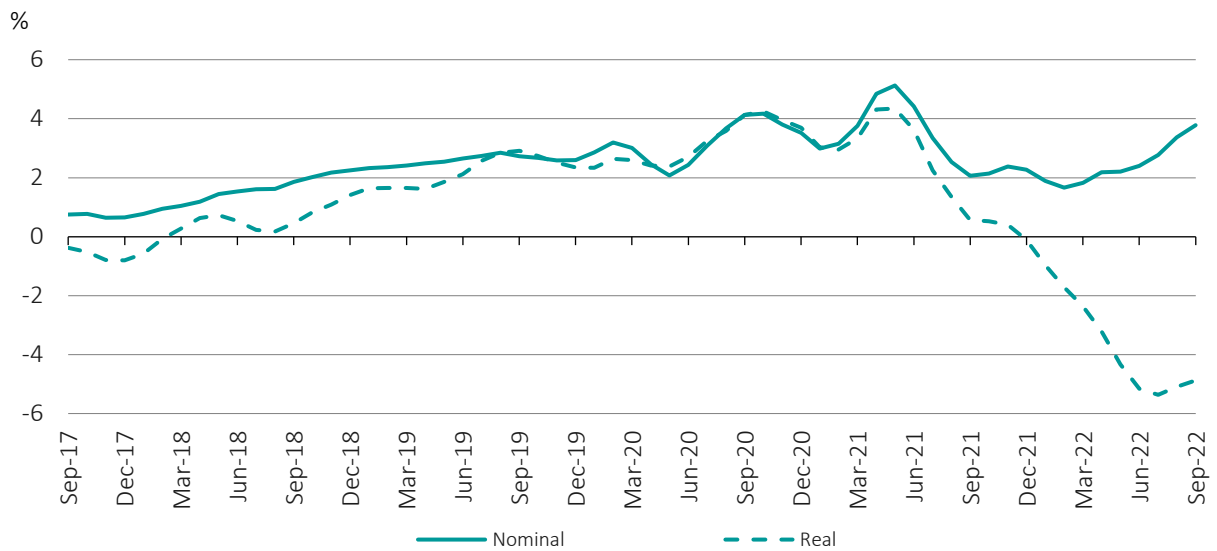
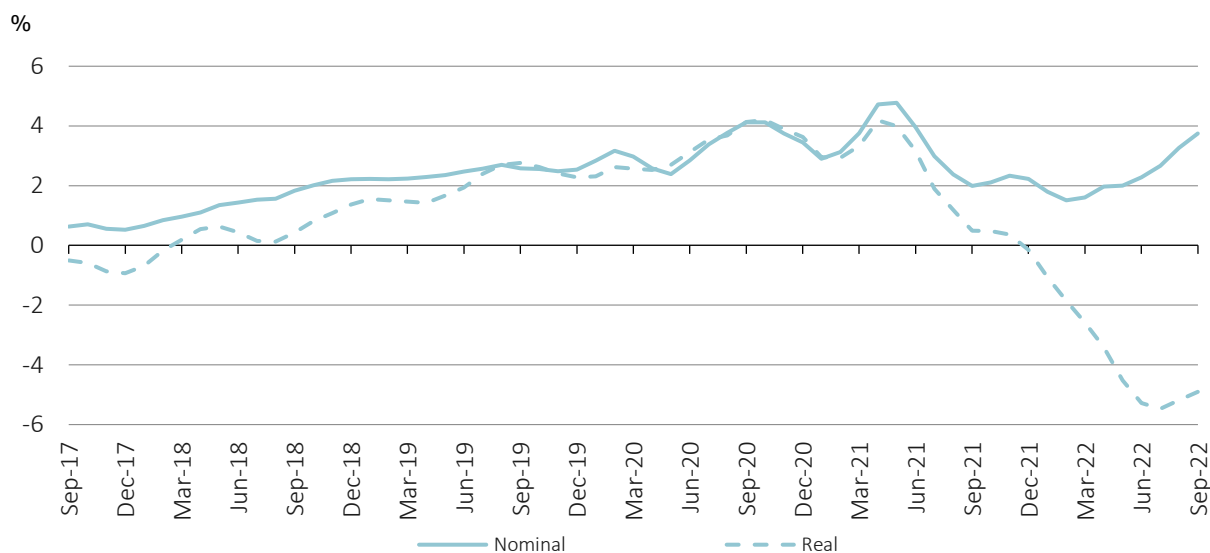




Figure 4. Year-on-year change of base gross monthly earnings per employee (nominal and real)



2. Gross earnings by economic activity

In September 2022, the total earnings ranged from €894, in the activities of Agriculture, farming of animals, hunting and forestry (section A), to €2,793, in the activities of Electricity, gas, steam, cold and hot water and cold air (D) (Table 2 of the Annex file).

The regular earnings ranged from €750, in the activities of Administrative and support service activities (N) and in the activities of Agriculture, farming of animals, hunting and forestry (A), to €2,602, in the activities of Electricity, gas, steam and air conditioning supply (D).

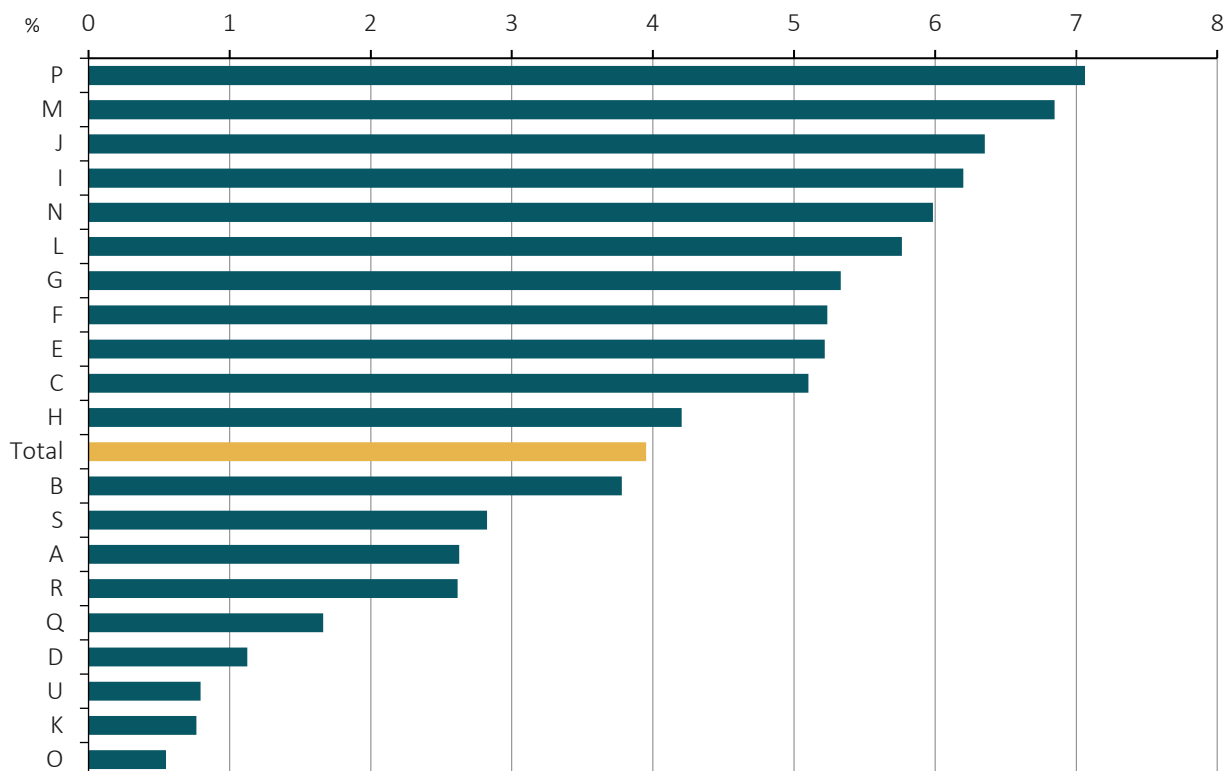
Similarly, also the base earnings ranged from €710, in the activities of Administrative and support service activities (N), to €2,411, in the activities of Electricity, gas, steam and air conditioning supply (D).

Compared to the same period of 2021, the major increases in total earnings were observed in the in the activities of Education (P; 7.1%) followed by Consultancy, scientific and technical activities (M; 6.8%). On the other hand, the lowest increases were observed in the Public administration and defence; compulsory social security (O; 0.5%) and in the Financial and insurance activities (K; 0.8%) (Figure 5).

The largest increases of the regular earnings were recorded in the Consultancy, scientific and technical activities (M; 7.1%) and in the Information and communication activities (J; 6.8%). In Arts, entertainment, sports and recreation activities (R), the regular earnings remained almost unchanged, and the lowest year-on-year change was observed in the Public administration and defence; compulsory social security (O; 0.6%).

Regarding the base earnings, the activities with the largest year-on-year increases were those in Information and communication activities (J; 7.1%) and in the Consultancy, scientific and technical activities (M; 7.0%). Negative year-on-year rates of change were observed in the activities of Arts, entertainment, sports and recreation activities (R; -0.3%).

Figure 5. Year-on-year change of total gross monthly earnings per employee by economic activity (NACE Rev. 2) in September 2022



Sections from NACE-Rev. 2: **A:** Agriculture, farming of animals, hunting and forestry; **B:** Mining and quarrying; **C:** Manufacturing; **D:** Electricity, gas, steam, cold and hot water and cold air; **E:** Water collection, treatment and distribution; sewerage, waste management and remediation activities; **F:** Construction; **G:** Wholesale and retail trade; repair of motor vehicles and motorcycles; **H:** Transportation and storage; **I:** Accommodation and food service activities; **J:** Information and communication activities; **K:** Financial and insurance activities; **L:** Real estate activities; **M:** Consultancy, scientific and technical activities; **N:** Administrative and support service activities; **O:** Public administration and defence; compulsory social security; **P:** Education; **Q:** Human health and social work activities; **R:** Arts, entertainment, sports and recreation activities; **S:** Other service activities; **T:** Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use; **U:** Activities of extraterritorial organisations and bodies.

3. Gross earnings by enterprise size

In September 2022, the total gross monthly earnings per employee ranged from €968, in enterprises with 1 to 4 employees, to €1,599, in enterprises with 250 to 499 employees (Table 3 of the Annex file).

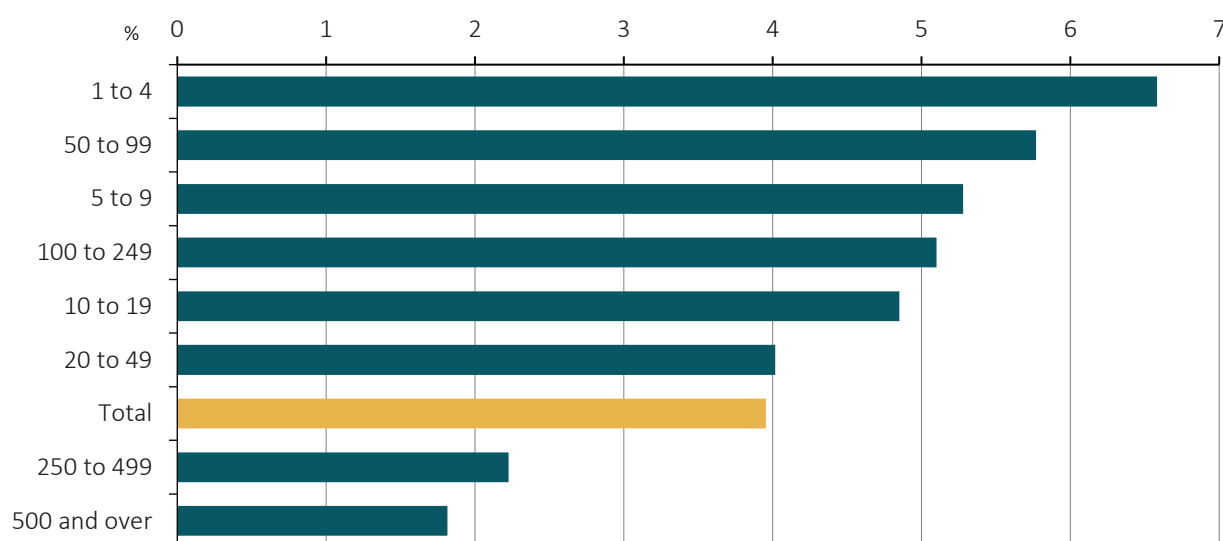
Similarly, also the average values from the regular and the base earnings ranged from the size class of 1 to 4 employees (€828 and €818, respectively) to the size class of 250 to 499 employees (€1,363 and €1,270, respectively).

Comparing to the same period of the last year (September 2021), the largest positive changes of total earnings were observed in enterprises of 1 to 4 employees (6.6%) and of 50 to 99 employees (5.8%), while the lowest year-on-year change was observed in the size class of 500 employees and over (1.8%; Figure 6).



The same pattern was observed for the regular and base earnings, the largest year-on-year positive changes occurred in the smallest enterprises – 1 to 4 employees (6.5% on both) and 50 to 99 (5.9% and 5.8%, respectively). In the regular earnings negative changes were not observed (the lowest increase, of 0.4%, was recorded in the enterprises of 250 to 499 employees), contrary to what happened to the base earnings (a negative year-on-year change of 0.3% was recorded in enterprises of 250 to 499 employees).

Figure 6. Year-on-year change of total gross monthly earnings per employee by employment size class in September 2022



4. Gross earnings by institutional sector

The total earnings of the institutional⁵ sector of Public Administration (PA) (as defined by the National Accounts)⁶ increased by 2.0%, from €1,689 in September 2021 to €1,724 in September 2022. In the same period, the regular component increased by 2.2%, from €1,579 to €1,613, while the base earnings increased by 2.2%, from €1,490 to €1,523 (Figures 7 and 8).

In the private sector, earnings have increased more significantly: the total earnings recorded a year-on-year increase of 4.9%, from €1,222 in September 2021 to €1,281 a year after; the regular component increased by 4.9%, from €1,005 to €1,054; and the base earnings increased by 4.8%, from €943 to €989.

The average earnings differences between the public and private sector reflect, among others, differences in the tasks performed and in the employees' qualifications. Thus, it is observed that the employees in the public sector

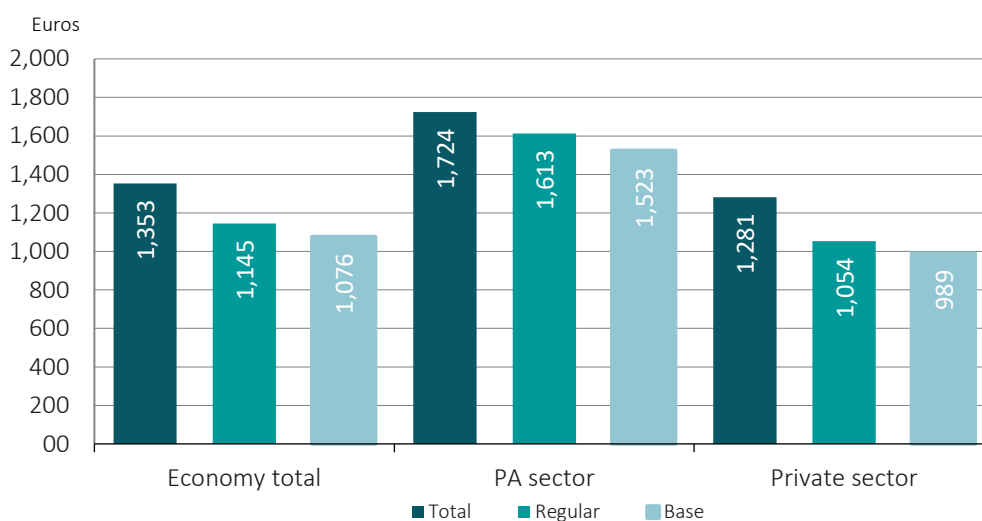
⁵ As defined in the Technical Note.

⁶ The universe of entities that compose the institutional sector of the Public Administration is subject to updates twice a year.



have, on average, a higher educational level⁷: in the public sector, 54.3% of the employees had completed the tertiary education (22.0% in the private sector), 25.5% had the upper secondary or post-secondary non-tertiary education (31.4% in private sector), and 20.2% had, at most, the lower secondary education (46.6% in the private sector).

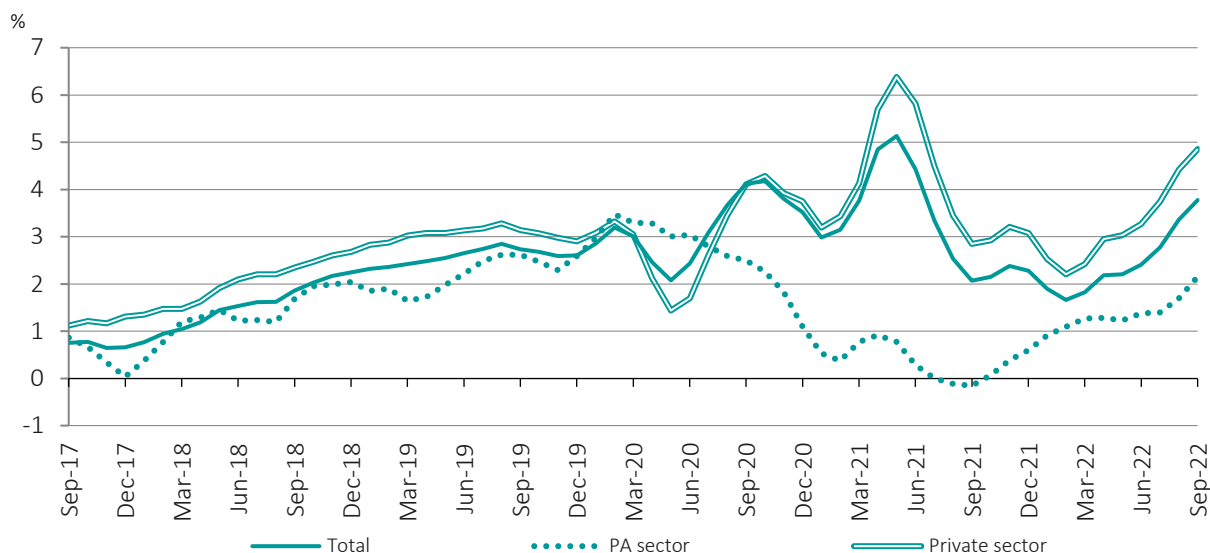
Figure 7. Gross monthly earnings per employee (total, regular and base) by institutional sector of the economy in September 2022



⁷ These results are the most recent at the date of disclosure of this Press Release. For the public sector, we mention the data released by the Directorate General for Administration and Public Employment (DGAEP), whose coverage is close to the public sector defined here, referring to December 31, 2020 and covering the entire country. For the private sector, the percentages were calculated based on Table 36 of the "Lists of Personnel 2020 (Annex A) from "Relatório Único" report", made available by the Strategy and Planning Office of the Ministry of Labour, Solidarity and Social Security. The data of this report relate to October 2020 and cover Mainland Portugal.



Figure 8. Year-on-year change of regular gross monthly earnings per employee by institutional sector of the economy



5. Earnings by use of technology and knowledge intensity

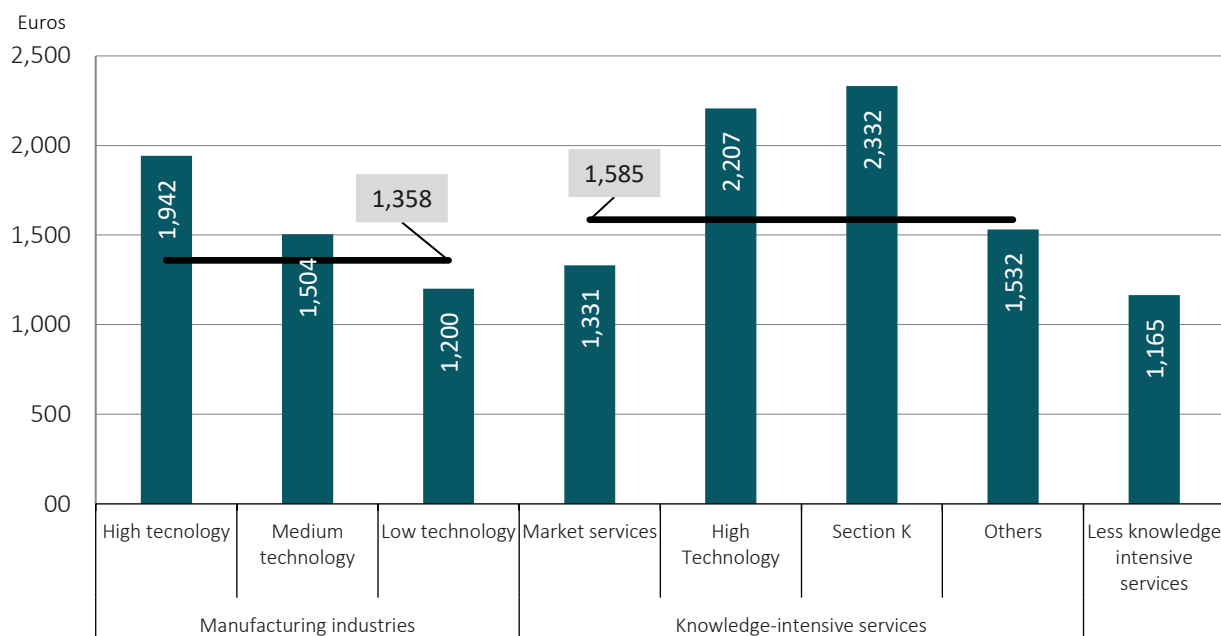
By using the economic activity classification of enterprises, it is possible to create groups according to their technology intensity (high, medium, and low, for Manufacturing industries) and the intensity of knowledge (knowledge intensive and less-knowledge intensive, for Services) (see note Figure 9).

In September 2022, the total gross monthly earnings per employee in the Manufacturing industries (Section C of NACE Rev. 2) was €1,358, corresponding to a year-on-year increase of 5.1%. In this section, the highest total gross earnings were observed in the High-technologic manufacturing industries (€1,942), to which corresponded a year-on-year increase of 5.3%. In the Low-tech manufacturing industries, the total earnings averaged €1,200 and registered the second highest year-on-year rate of change in the section (5.4%).

In the same month, the total gross monthly earnings per employee in Knowledge intensive services enterprises was €1,585, being higher among Financial and insurance activities (€2,332) and lower in the Market services enterprises (€1,331). These earnings have increased, when compared to September 2021, by 3.3%, 0.8% and 6.0%, respectively.

Compared to September 2021, the average total gross earnings of the Less knowledge intensive enterprises increased above Services' total (4.7% vs. 3.6%), reaching €1,165.

Figure 9. Number of employees and gross monthly earnings per employee (total) by technology intensity and knowledge intensity in September 2022



Notes: **High-technology manufacturing industries:** includes the NACE Rev. 2 divisions: 21 and 26; **Medium-technology manufacturing industries:** includes the NACE Rev. 2 divisions: 19, 20, 22 to 25, 27 to 30 and 33; **Low-technology manufacturing industries:** includes the NACE Rev. 2 divisions: 10 to 18, 31 and 32; **Knowledge-intensive services:** includes the NACE Rev. 2 divisions: 50, 51, 58 to 63, 64 to 66, 69 to 75, 78, 80 and 84 to 93; **Market services:** includes NACE Rev. 2 divisions: 50, 51, 69 to 71, 73, 74, 78 and 80; **High-technology services:** includes NACE Rev. 2 divisions: 59 to 63 and 72; **Financial and insurance activities:** includes NACE Rev. 2 divisions: 64 to 66; **Other knowledge intensive services:** includes NACE Rev. 2 divisions: 58, 75 and 84 to 93; **Less knowledge intensive services:** includes the NACE Rev. 2 divisions: 45 to 47, 49, 52, 53, 55 to 56, 68, 77, 79, 81, 82, 94 to 99.



Table 1. Number of employees and gross monthly earnings per employee (total, regular and base)

Portugal	Quarter ended in the month				Year-on-year change			
	Number of employees	Total gross earnings	Regular gross earnings	Base gross earnings	Number of employees	Total gross earnings	Regular gross earnings	Base gross earnings
	Thousands	Euro			%			
2022								
September	4,480.9	1,353	1,145	1,076	5.2	4.0	3.8	3.7
August	4,485.2	1,503	1,141	1,071	5.7	3.5	3.4	3.3
July	4,467.6	1,492	1,136	1,066	5.9	3.2	2.8	2.7
June	4,424.7	1,442	1,137	1,067	6.0	3.3	2.4	2.3
May	4,377.0	1,295	1,140	1,069	6.0	3.6	2.2	2.0
April	4,335.8	1,277	1,140	1,069	5.8	3.2	2.2	2.0
March	4,305.7	1,262	1,128	1,058	5.4	2.5	1.8	1.6
February	4,294.9	1,319	1,114	1,045	4.9	2.2	1.7	1.5
January	4,307.9	1,517	1,103	1,034	4.4	2.0	1.9	1.8
2021								
December	4,310.5	1,511	1,103	1,035	4.2	2.2	2.3	2.2
November	4,301.8	1,434	1,104	1,036	4.0	2.2	2.4	2.3
October	4,270.9	1,249	1,106	1,039	3.7	2.6	2.1	2.1
September	4,259.8	1,302	1,104	1,037	3.6	2.8	2.1	2.0

Source: Calculations by Statistics Portugal using the DMR/SS and the RC/CGA.



TECHNICAL NOTE

The statistics on “Gross monthly earnings per employee” published with this Press Release are the result of the calculations and analysis performed by Statistics Portugal on the information from the Monthly Statement of Earnings (*Declaração Mensal de Remunerações*) from Social Security (DMR/SS), following a protocol celebrated between Statistics Portugal and the Instituto de Informática, I.P., and the Contributory Relation (*Relação Contributiva*) of *Caixa Geral de Aposentações* (RC/CGA). Initially classified as statistical information under development (published in the StatsLab area of the Statistics Portugal website), it was considered as official statistics as of September 2021.

The **gross monthly earnings per employee** correspond to the ratio between the sum of all earnings paid by the enterprises and the total number of employees in those enterprises. Hence, its evolution reflects changes in the amount of earnings paid (for example, the payment of bonuses, holiday allowances or overtime work), but also in the number of employees and its composition, namely in terms of non-observed characteristics in this dataset (part-time versus full-time workers; educational level; occupation; years of experience; hours worked; among others).

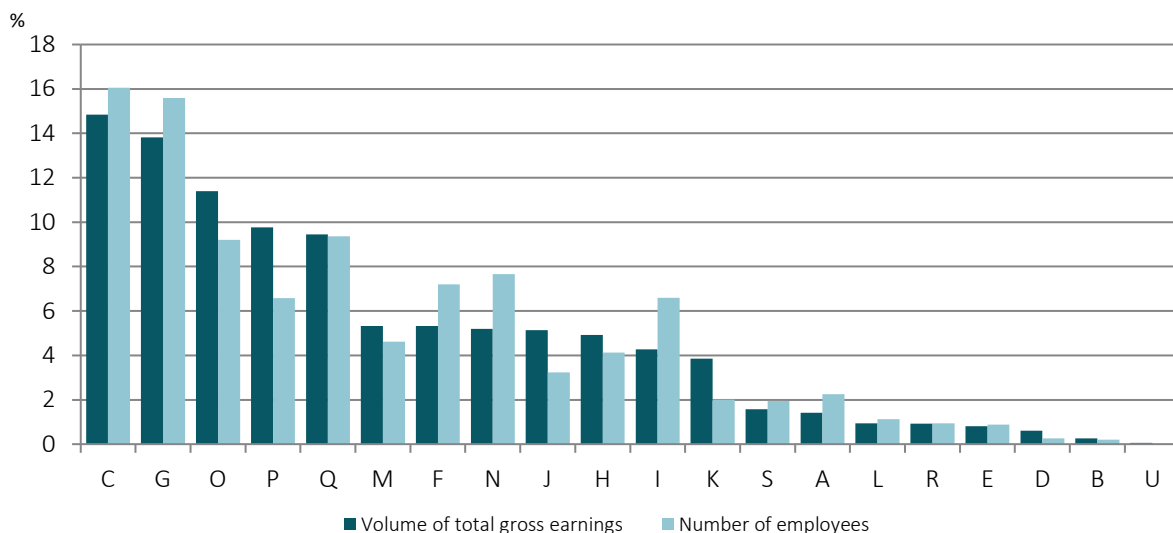
In the calculations by **enterprise’s economic activity** (NACE Rev. 2), the records where it was not possible to match the enterprise with its record on the enterprises’ economic activity file compiled by Statistics Portugal (FUE – *Ficheiro de Unidades Estatísticas*) were excluded, which corresponds to 0.6% of enterprises and 0.1% of employees in 2021.

Each employee is counted as many times as the **number of jobs** reported to the SS and CGA. For example, an employee with two jobs in two different enterprises is counted twice. Therefore, the total number of employees corresponds to the total number of jobs. Besides, in the information from the SS besides employees, ship-owners, teachers that own educational institutions, members of statutory bodies, and domestic workers are also included.

In the figures below, it is shown the percentage distribution of total gross monthly earnings (volume) and the number of employees by economic activity sector (NACE Rev. 2) and enterprise size class in 2021.

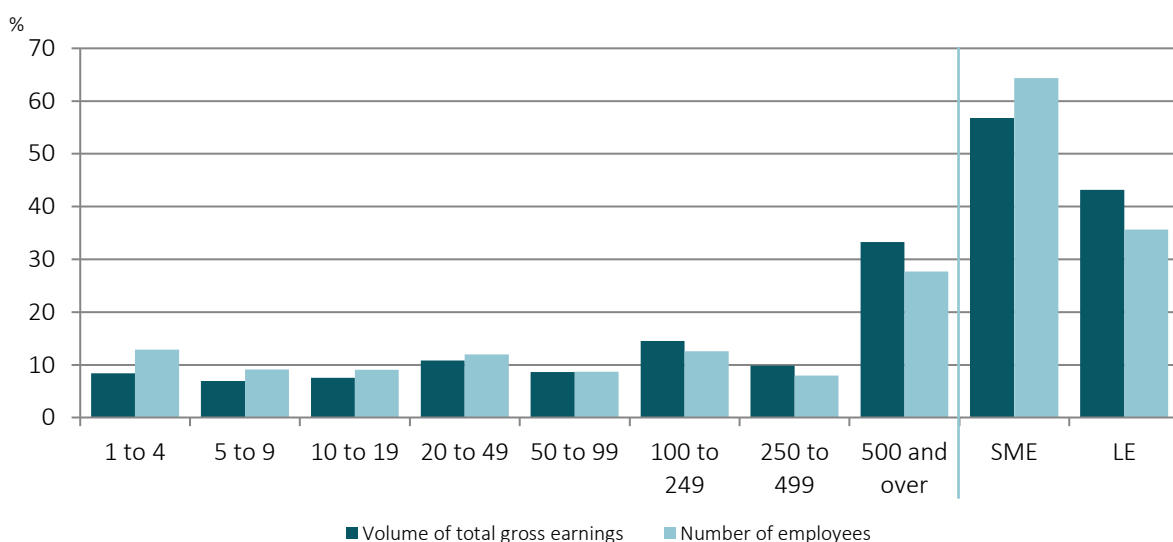


Distribution of the total gross earnings (volume) and the number of employees by economic activity (NACE Rev. 2) in 2021



Sections from NACE-Rev. 2: **A:** Agriculture, farming of animals, hunting and forestry; **B:** Mining and quarrying; **C:** Manufacturing; **D:** Electricity, gas, steam, cold and hot water and cold air; **E:** Water collection, treatment and distribution; sewerage, waste management and remediation activities; **F:** Construction; **G:** Wholesale and retail trade; repair of motor vehicles and motorcycles; **H:** Transportation and storage; **I:** Accommodation and food service activities; **J:** Information and communication activities; **K:** Financial and insurance activities; **L:** Real estate activities; **M:** Consultancy, scientific and technical activities; **N:** Administrative and support service activities; **O:** Public administration and defence; compulsory social security; **P:** Education; **Q:** Human health and social work activities; **R:** Arts, entertainment, sports and recreation activities; **S:** Other service activities; **T:** Activities of households as employers; undifferentiated goods- and services-producing activities of households for own use; **U:** Activities of extraterritorial organisations and bodies.

Distribution of the total gross earnings (volume) and the number of employees by enterprise size in 2021



Nota: PME – empresas, no máximo, com 249 trabalhadores; GE – empresas com 250 ou mais trabalhadores



The information received from the DMR/SS includes the sum of earnings by “Social Security Contributory Scheme” and “Earnings Components”. The information received from the RC/CGA includes the sum of earnings of the subscribers by “Type of earnings”. Despite the name differences, both the “Earnings Components” and the “Type of Earnings” refer to the earnings components paid to employees.

Earnings components (SS): correspond to the classification of earnings of Social Security according to its nature, which cover the following:

- Transport and daily allowances
- Bonuses and other monthly benefits
- Commissions
- Compensations owed for termination of the employment contract
- Holiday allowance
- Fees for rendering services due to the accumulation of positions/duties
- Compensation in intermittent employment contracts
- Regular monthly allowances
- Christmas allowance
- Bonuses and other non-monthly benefits
- Base salary
- Meal allowance
- Overtime work
- Night-time work
- Regular non-monthly allowances
- Armed forces
- Variable earnings
- Paid untaken holidays
- Earnings statements corrections
- Temporary work in higher positions
- Promotions

Type of earnings (CGA): correspond to the classification of earnings of *Caixa Geral de Aposentações*, which cover the following:

- Base earnings
- Compensation in intermittent employment contracts
- Seniority payments
- Permanent earnings
- Bonuses and other monthly benefits
- Regular monthly allowances



- Variable earnings
- Transport and daily allowances
- Compensations owed for termination of the employment contract
- Night-time work
- Overtime work
- Meal allowance
- Commissions
- Fees for rendering services due to the accumulation of positions/duties
- Bonuses and other non-monthly benefits
- Holiday allowance
- Paid untaken holidays
- Christmas allowance

SOME CONCEPTS

Note on the taxable income applicable to the earning of this Press Release

The total, regular and base gross monthly earnings of this Press Release only consider the taxable earnings, i.e., the amount of earnings that are subject to income tax and contributions to SS or CGA. Thus, it excludes the amounts such as the meal allowance up to €4.77 or €7.63, if paid in cash or a meal card.

Gross earnings

Gross income, in cash or in kind, paid to workers for the hours of work performed or for the work performed during the normal and overtime periods, including the payment of hours not worked (holidays, public holidays and other paid absences) and regular allowances such as those related to food, job position, accommodation or transport, seniority, productivity, attendance, exemption from working hours, painful, dangerous, dirty, shift and night work.

Note: The “gross monthly earning per employee” includes all components of variables Earning components (SS) and Type of earnings (CGA).

Regular gross monthly earnings

Gross monthly earnings that correspond to the sum of the basic remuneration with other regular earnings components, namely meal allowances, seniority allowances, bonuses, and other regular monthly payments.



Notes:

- From Nature of earnings (SS) only includes the components “Base salary”, “Meal allowance”, “Regular monthly allowances” and “Bonuses and other monthly benefits”. From Type of earnings (CGA) it includes the components “Base earnings”, “Seniority payments”; “Permanent earnings”, “Bonuses and other monthly benefits” and “Meal allowance”.

- In 2021, it corresponded to 81.2% of the total gross monthly earnings.

Base earnings

The gross amount, before deduction of taxes and social security contributions, in cash or in kind, paid regularly in the reference period and corresponding to the normal working period.

Notes:

- Only includes the component “Base salary” of variable Nature of earnings (SS) and the component “Base earnings” if variable Type of earnings (CGA).

- In 2021, it corresponded to 76.3% if the total gross monthly earnings.

Employee

Person who carries out an activity under the authority and direction of another under the terms of an employment contract, whether subject to written form or not, which entitles him/her to a remuneration that does not depend on the results of the economic unit for which he/she works.

Institutional sector

The variable “institutional sector” uses the classification “economic sector (public sector/private sector)”, corresponding the S13 sector to the Public Administration (PA) sector as defined in the National Accounts, using as reference the list of entities that belong to the Public Administrations – S13. The private sector corresponds to the total of economy excluding the PA.

On year change

The year-on-year change compares the level of the variable in the current quarter with that of the corresponding quarter of the previous year. This change considering a seasonal stable pattern is not affected by this type of fluctuation but may, however, be influenced by specific effects in a given quarter.



REVISIONS

The data base of DMR is in continuous updating, always existing some share of non-delivered earnings statements, mainly in the last 4 months. The information received from RC/CGA has a definitive character.

The information published with this Press Release that regards the last 3 reference months (moving quarters ended in those months) will be subject to revisions in the next months. The impact of these revisions, measured by the difference between the estimates now released and the ones published in the last Press Release, are the following:

Revision of the estimates of the June 2022 - main indicators -				
	Unit	April 2022	May 2022	June 2022
Number of enterprises		- 0.5	- 0.6	1.0
Number of employees	Thousands	- 1.3	0.8	13.7
Total gross monthly earnings per employee		0	1	3
Regular gross monthly earnings per employee	Euros	0	0	- 2
Base gross monthly earnings per employee		0	0	- 2
Number of enterprises (y-o-y)		- 0.1	- 0.2	0.2
Number of employees (y-o-y)		- 0.1	0.0	0.4
Total gross monthly earnings per employee	pp	0.0	0.0	0.2
Regular gross monthly earnings per employee		0.0	0.0	- 0.1
Base gross monthly earnings per employee		0.0	0.0	- 0.2

Note: y-o-y - Year-on-year rate of change.

TREATMENT OF NON-RESPONSES

In order to reduce the level of revisions of the values published for the most recent months, the DMR/SS data were imputed in two situations: 1) of enterprises that are systematically late in sending the information; and 2) of enterprises that, also systematically, do substantial corrections the values reported in previous months.

In the first case, the detection process for missing enterprises only targets those with 10 or more employees. An enterprise is considered as missing if there was an answer in month M-1, but not in month M (M being the last reference month).

In the second case, it is considered that an enterprise has made a substantial correction of the values already reported when the correction is worth €10,000 or more. The detection of these enterprises is ensured by a combination of two methods: 1) an ad hoc criterion; 2) through a supervised Machine Learning algorithm in the form of the Support Vector Machine (SVM).

For a more detailed description of the treatment of non-response and other methodological characteristics of this statistical operation, it is suggested to see the respective [methodological document](#), available on the Statistics Portugal website (only available in Portuguese).

Due to rounding, the totals in tables and figures do not always match the sum of parts.



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DISSTAQUE

The present Press Release includes data received on 19th October 2022.

Next Press Release – 9 February 2023

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