Earnings statistics

Statistics Explained

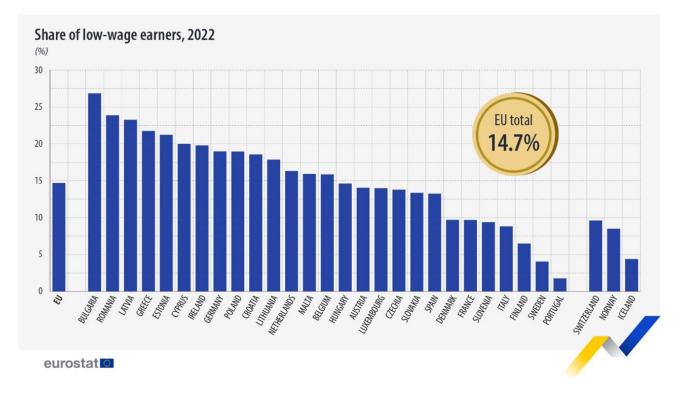
Data extracted in February 2025. Planned article update: December 2028.

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Highlights

" In 2022, the highest median gross hourly earnings in the EU were recorded in Denmark (€ 29.8) and Luxembourg (€ 24.0) and the lowest in Bulgaria (€ 4.1). "

" In 2022, the highest proportion of low wage earners was observed in Bulgaria (26.8%) and Romania (23.9%) and the lowest in Portugal (1.8%)."



Low wage earners in the EU, 2022

This article analyses the results of the 4-yearly structure of earnings survey (SES) that provides comparable in-depth information at European Union (EU) level on the link between the level of earnings and the individual characteristics of employees (sex, age, occupation, educational level) and their employer (economic activity, size of the enterprise, etc.).

General overview

The SES is a large enterprise survey providing detailed information on the structure and distribution of earnings in the EU. The SES is important in compiling other structural indicators such as the gender pay gap or the proportion of low-wage earners.

The figures below, based on the latest round of the SES, relate to October 2022. Data on low-wage earners as well as corresponding median gross hourly earnings refer to all employees (**excluding apprentices**) working in enterprises with 10 employees or more and which operate in all sectors of the economy except agriculture, forestry and fishing (NACE Rev. 2 section A) and public administration and defence; compulsory social security (NACE Rev. 2 section O). **Gross hourly earnings** refer to the wages and salaries earned by full-time and part-time employees, per hour paid, in the reference month (generally October 2022) before any tax and social security contributions are deducted. Wages and salaries include any overtime pay, shift premiums, allowances, bonuses, commission, etc.

EU and EA aggregates are compiled as the sum of all EU countries .

Median gross hourly earnings

Median gross hourly earnings vary by 1 to 7 between EU countries when expressed in euro

As measured in October 2022, median gross hourly earnings expressed in euro show large variations between EU countries. The highest median gross hourly earnings were recorded in Denmark (\in 29.8), ahead of Luxembourg (\in 24.0), Belgium (\in 23.8), Ireland (\in 20.3), Germany (\in 19.4), Finland and Sweden (\in 19.3 each) and the Netherlands (\in 19.0). By contrast, the lowest median gross hourly earnings were recorded in Bulgaria (\in 4.1), Romania (\in 5.6), Hungary (\in 5.7), Portugal (\in 6.2), Croatia (\in 6.8) and Poland (\in 6.9). Across EU countries, the highest national median gross hourly earnings (in euro) were 7.4 times higher than the lowest (Figure 1).

Median gross hourly earnings, 2022

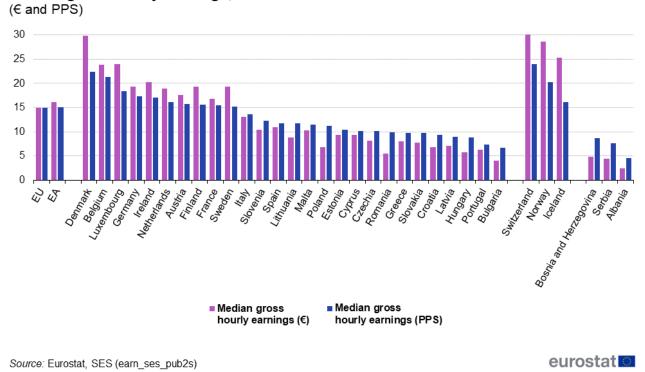


Figure 1: Median gross hourly earnings, € and PPS, 2022 Source: Eurostat (earn_ses_pub2s)

... and by 1 to 3 when expressed in PPS

The highest national median gross hourly earning in October 2022 was 3.3 times higher than the lowest when expressed in purchasing power standards (PPS), which eliminates price level differences between countries. The highest median gross hourly earnings in PPS were recorded in Denmark (22.4 PPS), ahead of Belgium (21.3 PPS), Luxembourg (18.4 PPS), Germany (17.3 PPS) and Ireland (17.0 PPS). At the opposite end of the scale, the lowest median gross hourly earnings were observed in Bulgaria (6.7 PPS), Portugal (7.4 PPS), Hungary and Latvia (8.9 PPS each), Croatia (9.4 PPS), Slovakia (9.7 PPS), Greece (9.8 PPS) and Romania (9.9 PPS) (Table 1).

	Median	Median		
	gross hourly earnings (PPS)	gross hourly earnings (€)	Low-wage threshold (in euro per hour)	Proportion of low wage earners (%)
EU	14.9	14.9	-	14.7
EA	15.1	16.2	-	14.4
Belgium	21.3	23.8	15.9	15.9
Bulgaria	6.7	4.1	2.7	26.8
Czechia	10.2	8.2	5.5	
Denmark	22.4	29.8	19.9	9.7
Germany	17.3	19.4	12.9	19.0
Estonia	10.5	9.4	6.3	21.2
Ireland	17.0	20.3	13.5	19.8
Greece	9.8	8.0	5.3	21.7
Spain	11.8	11.0	7.3	
France	15.5	16.8	11.2	9.7
Croatia	9.4	6.8	4.5	18.6
Italy	13.6	13.1	8.7	8.8
Cyprus	10.2	9.3	6.2	20.0
Latvia	8.9	7.2	4.8	23.3
Lithuania	11.7	8.8	5.9	17.9
Luxembourg	18.4	24.0	16.0	14.0
Hungary	8.9	5.7	3.8	14.6
Malta	11.6	10.3	6.9	15.9
Netherlands	16.2	19.0	12.6	16.3
Austria	15.7	17.7	11.8	14.0
Poland	11.2	6.9	4.6	19.0
Portugal	7.4	6.2	4.2	1.8
Romania	9.9	5.6	3.7	23.9
Slovenia	12.3	10.5	7.0	9.4
Slovakia	9.7	7.7	5.1	13.4
Finland	15.6	19.3	12.9	6.5
Sweden	15.2	19.3	12.9	4.1
Switzerland	23.9	37.6	25.1	9.6
lceland	16.2	25.4	16.9	4.4
Norway	20.2	28.7	19.1	8.5
Bosnia and Herzegovina	8.7	4.8	3.2	17.5
Albania	4.6	2.5	1.6	16.4
Serbia	7.6	4.4	3.0	21.9

Median gross hourly earnings and low-wage earners, 2022

Notes: Data refer to enterprises with 10 employees and more in NACE Rev. 2 sections B to S excluding O.

Apprentices are excluded.

(-) not applicable

Source: Eurostat, SES (earn_ses_pub1s; earn_ses_pub2s)



Low-wage earners

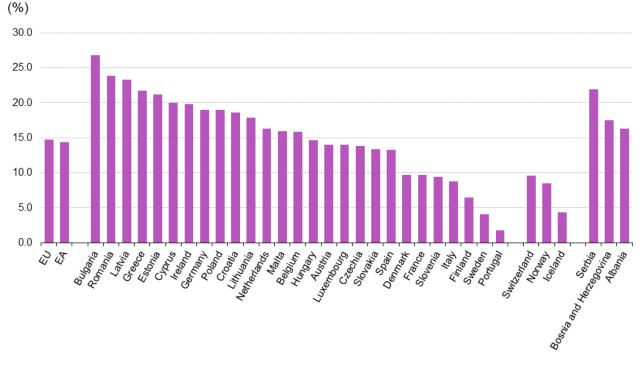
Low-wage earners are defined as those employees earning two-thirds or less of the national median gross hourly earnings. Hence, the threshold that determines low-wage earners is relative and specific to each EU country.

Almost 1 in every 7 employees in the EU is a low-wage earner

In 2022, 14.7% of employees in the EU were low-wage earners compared with 15.2% in 2018. 17.1% of female employees were low-wage earners, compared with 12.6% of male employees.

Highest share of low-wage earners in Bulgaria, lowest in Portugal

In 2022, the proportion of low wage earners varied between EU countries. The highest percentages were observed in Bulgaria (26.8%), Romania (23.9%), Latvia (23.3%), Greece (21.7%), followed by Estonia (21.2%) and Cyprus (20.0%). By contrast, less than 10% of employees were low wage earners in Portugal (1.8%), Sweden (4.1%), Finland (6.5%), Italy (8.8%), Slovenia (9.4%) followed by France and Denmark (9.7% each) (Figure 2).



Proportion of low-wage earners in EU countries, 2022

Source: Eurostat, SES (earn_ses_pub1s)

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Figure 2: Proportion of low-wage earners (%), 2022 Source: Eurostat (earn_ses_pub1s)

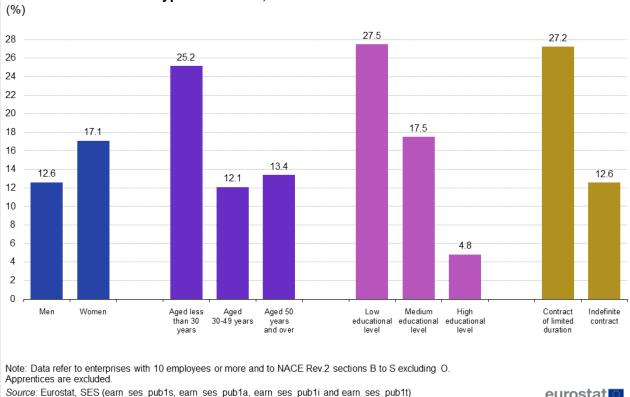
For countries outside the euro area, the low wage thresholds expressed in national currency are, per hour:

- Bulgaria: BGN 5.3
- · Czechia: CZK 134.9
- Denmark: DKK 148.0
- Hungary: HUF 1 493.7
- · Poland: PLN 21.6
- · Romania: RON 18.3
- Sweden: SEK 136.7

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Low-wage earners by age groups, level of education, type of contract and NACE section

About a guarter (25.2%) of EU employees aged less than 30 years were low wage earners in 2022, compared with 12.1% for the age group 30-49 years and with 13.4% for the employees aged 50 years and over. The level of education also plays an important role: the lower the level, the higher the likelihood of being a low-wage earner. In 2022, 27.5% of EU employees with a low education level were low-wage earners. A lower share of employees with a medium level of education were low-wage earners (17.5% of the employees) while this was the case for only 4.8% of the employees with a high education level. The type of contract also has a significant impact: 27.2% of EU employees with a contract of limited duration were low-wage earners, compared with 12.6% of those with an indefinite contract. In 2022, the share of low-wage earners recorded in the EU was highest (35.1%) in the NACE Rev. 2 section I ('Accommodation and food service activities'); followed by 32.3% in section N ('Administrative and support service activities') that includes in particular the persons employed by interim agencies.



Proportion of low wage earners in the EU, by sex, age groups, level of education and type of contract, 2022

Figure 3: Proportion of low-wage earners in the EU, by sex, age groups, level of education and type of contract, %, 2022 Source: Eurostat (earn_ses_pub1s), (earn_ses_pub1a), (earn_ses_pub1i), (earn_ses_pub1t)

Distribution of earnings

How are earnings distributed in the EU?

Disparities in gross monthly earnings within a country can be measured using deciles, and in particular the lowest and highest deciles, which correspond to the 10% of employees earning the least (D1) and to the 10% earning the most (D9). As a consequence, a high D9/D1 interdecile ratio indicates large disparities.

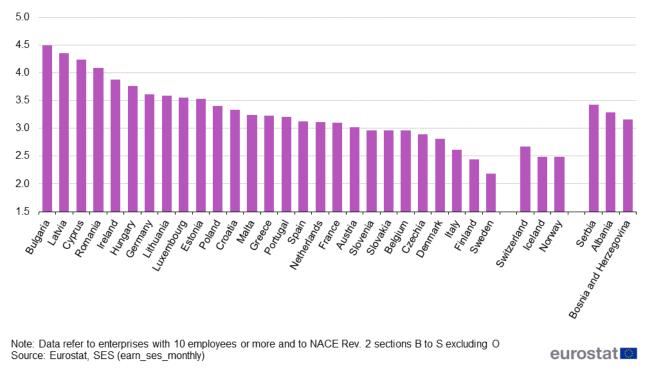
- D1 is the maximum gross monthly earnings received by the 10% of employees earning the least.
- D9 is the minimum gross monthly earnings received by the 10% of employees earning the most.

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Data on distribution of earnings, as well as corresponding median gross monthly earnings refers to all employees (**including apprentices**) working in enterprises with 10 employees or more and which operate in all sectors of the economy except agriculture, forestry and fishing (NACE Rev. 2 section A) and public administration and defense; compulsory social security (NACE Rev. 2 section O).

Largest earnings disparities in Bulgaria; lowest in Sweden

In 2022, the D9/D1 dispersion ratio ranged from 2.2 in Sweden to 4.5 in Bulgaria. The lowest D9/D1 ratios were recorded, after Sweden (2.2), in Finland (2.4), Italy (2.6), Denmark (2.8) and Czechia (2.9). After Bulgaria (4.5), the highest D9/D1 ratios were recorded in Latvia (4.4), Cyprus (4.2) and Romania (4.1). The other EU countries recorded a ratio between 3.0 and 4.0. Among EFTA countries, the lowest ratio was observed in Norway and Iceland (both 2.5) and the highest in Switzerland (2.7) (Figure 4).



D9/D1 dispersion ratio of gross monthly earnings, 2022

Figure 4: D9/D1 dispersion ratios in the EU countries, 2022 Source: Eurostat (earn_ses_monthly)

Largest gap between high and median wages in Cyprus, between median and low wages in Latvia

The highest disparity at the **upper end** of the gross monthly earnings distribution in 2022 was registered in Cyprus (with a D9/Median ratio of 2.5). This means that the 10% best paid employees in Cyprus earned 2.5 times as much as the median. Cyprus is followed by Bulgaria, Portugal and Romania (each with a ratio of 2.4), Ireland, Luxembourg and Latvia (all with a ratio of 2.2) as well as Hungary (2.1). By contrast, Sweden and Belgium (both with a ratio of 1.6) recorded the lowest ratios followed by Finland and Denmark (1.7 in both cases) (Table 2).

Gross month	y earnings	dispersion	ratios, 2022
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	Gross monthly earnings (€)			Earnings dispersion ratios		
	D1	Median	D9	Median/D1	D9/D1	D9/Median
Belgium	2 061	3 758	6 096	1.8	3.0	1.6
Bulgaria	372	684	1 672	1.8	4.5	2.4
Czechia	872	1 415	2 518	1.6	2.9	1.8
Denmark	2 722	4 465	7 658	1.6	2.8	1.7
Germany	1 684	3 143	6 079	1.9	3.6	1.9
Estonia	850	1 548	3 000	1.8	3.5	1.9
Ireland	1 913	3 323	7 407	1.7	3.9	2.2
Greece	756	1 221	2 438	1.6	3.2	2.0
Spain	1 199	1 871	3 745	1.6	3.1	2.0
France	1 574	2 503	4 882	1.6	3.1	2.0
Croatia	684	1 170	2 281	1.7	3.3	1.9
Italy	1 510	2 149	3 948	1.4	2.6	1.8
Cyprus	955	1 648	4 049	1.7	4.2	2.5
Latvia	601	1 190	2 615	2.0	4.4	2.2
Lithuania	849	1 494	3 047	1.8	3.6	2.0
Luxembourg	2 588	4 172	9 199	1.6	3.6	2.2
Hungary	544	972	2 047	1.8	3.8	2.1
Malta	1 037	1 772	3 365	1.7	3.2	1.9
Netherlands	1 789	3 097	5 577	1.7	3.1	1.8
Austria	1 801	2 948	5 434	1.6	3.0	1.8
Poland	680	1 135	2 314	1.7	3.4	2.0
Portugal	814	1 092	2 612	1.3	3.2	2.4
Romania	548	948	2 239	1.7	4.1	2.4
Slovenia	1 132	1 743	3 357	1.5	3.0	1.9
Slovakia	786	1 264	2 328	1.6	3.0	1.8
Finland	2 254	3 254	5 500	1.4	2.4	1.7
Sweden	2 445	3 335	5 340	1.4	2.2	1.6
Iceland	3 123	4 566	7 761	1.5	2.5	1.7
Norway	3 149	4 680	7 814	1.5	2.5	1.7
Switzerland	4 561	6 778	12 183	1.5	2.7	1.8
Bosnia and Herzegovina	506	817	1 596	1.6	3.2	2.0
Albania	286	441	940	1.5	3.3	2.1
Serbia	433	755	1 481	1.7	3.4	2.0

Notes: Data refer to enterprises with 10 employees and more in NACE Rev. 2 sections B to S excluding O. Apprentices are included.

Source: Eurostat, SES (earn_ses_monthly)



Table 2: Gross monthly earnings dispersion ratios, 2022 Source: Eurostat (earn_ses_monthly)

At the **lower end** of the gross monthly earnings distribution, disparities in 2022 were largest in Latvia, with a Median/D1 ratio of 2.0). This means that, in Latvia, the 10% least paid employees earned less than half of the median earnings. Latvia is followed by Germany (with a ratio of 1.9), Bulgaria, Belgium, Estonia, Hungary and Lithuania (all with a ratio of 1.8). By contrast, the lowest disparities in the lower end of distribution were recorded in Portugal (with a ratio of 1.3), Italy, Sweden and Finland (all with a ratio of 1.4) (Table 2).

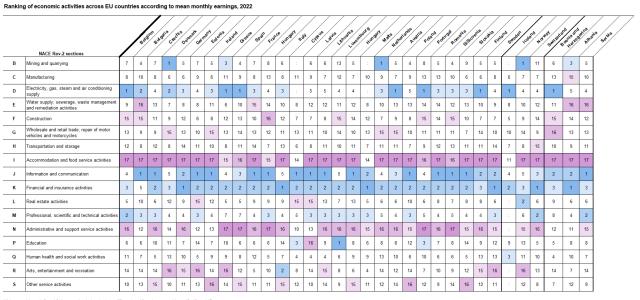
And what about economic activities?

Differences in earnings between economic activities were measured in terms of gross monthly earnings expressed in euros. **Gross monthly earnings** refer to the wages and salaries earned by full-time and part-time employees in the reference month (generally October 2022) before any tax and social security contributions are deducted. Wages

and salaries include any overtime pay, shift premiums, allowances, bonuses, commissions, etc. The gross monthly earnings of part-time employees have been converted into full-time units before being included in the calculation.

Information and communication and Finance and insurance among the highest paying industries

On the basis of gross monthly earnings, Information and communication ranked among the 3 highest paying economic activities in every EU countries, except Denmark, Italy and Luxembourg (where it ranked 5th) as well as Belgium, Greece, the Netherlands and Portugal (where it ranked 4th). The sector Finance and insurance was also largely represented among the top 3 paying industries, with the exception of Bulgaria (where it ranked 5th) (Table 3).



Highest rankings 1, 2 and 3 (best paying industries) are differentiated from lowest rankings 15, 16 and 17 Values in the table: 1 = highest mean monthly earnings; 17 = lowest mean monthly earnings.

: Data not available Source: Eurostat, SES (earn_ses22_20)

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Table 3: Ranking of economic activities across EU countries, 2022 Source: Eurostat (earn_ses18_20)

Electricity, gas, steam and air conditioning supply was the best paying industry in Belgium, Greece, Spain, Austria, Portugal and Finland and ranked second in Bulgaria as well as in Denmark. Mining and quarrying ranked first in Denmark and the Netherlands and third in Greece. Education was the best paying economic activity in Luxembourg and the third in Cyprus and Portugal. Finally, Professional, scientific and technical activities were the second highest paying industry in Belgium while ranking third in Bulgaria, Czechia, Estonia, Croatia, Latvia, Lithuania, Luxembourg, Hungary, Malta, Poland as well as Sweden (Table 3).

Accommodation and food and Administrative and support services among the lowest paying

At the opposite end of the ranking, Accommodation and food service activities was the lowest paying activity of the economy in all EU countries except Spain, Portugal and Slovenia (last but 1 position); Greece and Croatia (last but 2) as well as Cyprus and Malta (last but 3). It should be noted though that tips are not included in the definition of gross monthly earnings. Administrative and support service activities, that include persons employed by temporary work agencies, also ranked in the bottom 3 with the exceptions of Denmark (last but 3 position), as well as of Ireland and Latvia (last but 4); Bulgaria and Estonia (last but 5) and Cyprus (last but 7) (Table 3).

Data sources

The Structure of earnings survey (SES) is carried out with a 4-yearly periodicity according to Regulation (EC) No 530/1999. The most recent available reference years for the SES are 2002, 2006, 2010, 2014, 2018 and 2022. The data collection is based on legislation and data become available approximately 2 years after the end of the reference period.

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National statistical offices collect the information on relationships between the level of earnings, individual characteristics of employees (sex, age, occupation, length of service, educational level) and the characteristics of their employer (economic activity, size of the enterprise, etc.) - the enterprise.

The statistics of the SES refer to enterprises employing at least 10 employees in all areas of the economy except agriculture, forestry and fishing (NACE Rev. 2 section A) and public administration and defence; compulsory social security (NACE Rev. 2 section O). Economic activities are classified using the Statistical classification of economic activities in the European Community (NACE). SES 2002 and 2006 are classified in NACE Rev.1.1 whereas SES 2010, 2014, 2018 and 2022 are classified in NACE Rev.2. The inclusion of section L (in 2002 and 2006) and section O (in 2010, 2014, 2018 and 2022), as well as the inclusion of enterprises with less than 10 employees, is optional.

Occupations are coded according to the International standard classification of occupations, 1988 - ISCO-88 (COM) in 2002 and 2006 whereas in SES 2010, 2014, 2018 and 2022 are coded in ISCO-08.

The variable 'Highest successfully completed level of education and training' in SES 2014, 2018 and 2022 is classified using the International standard classification of education, 2011 version (ISCED 11) and the education level groupings are as follows: Low level: ISCED 0, 1 and 2 (Early childhood education ('less than primary' for educational attainment); Primary education; Lower secondary education), Medium level: ISCED 3 and 4 (Upper secondary education and post-secondary non-tertiary education), and High level: ISCED 5a, 5b and 6 (Short-cycle tertiary education; Bachelor's or equivalent level; Master's or equivalent level and Doctoral or equivalent level). For SES 2002, 2006 and 2010 International standard classification of education, 1997 version (ISCED 97) was used.

The regional breakdown is based on the Nomenclature of territorial units for statistics (NUTS) .

Context

The main reasons for initiating the European Structure of earnings survey (SES) were set out in Regulation (EC) No 530/1999 of 9 March 1999 concerning structural statistics on earnings and on labour costs. The objective of the Regulation (EC) No 530/1999 and the related Commission Regulation (EC) No 1738/2005 in this domain is to provide accurate and harmonised data on earnings in the EU Member States, EFTA countries and candidate countries for policy-making and research purposes.

The SES is a large scale enterprise sample survey that provides detailed and Europe wide comparable information on relationships between the level of remuneration, individual characteristics of employees (sex, age, occupation, length of service, highest educational level attained, etc.) and their employer (economic activity, size and location of the enterprise).

Users of the SES want to determine the earnings received by employees and to investigate the statistical relationship between the level of the earnings and the individual characteristics of the employees and the characteristics of the employer.

The SES represents a rich microdata source for European policy-making and research purposes. Access to microdata is granted to researchers according to specific conditions and respecting statistical confidentiality.

Explore further

Other articles

- Gender pay gap statistics
- Labour cost index recent trends
- Labour cost structural statistics levels
- · Minimum wage statistics
- · Wages and labour costs

Database

• Earnings

Structure of earnings survey 2022 (earn_ses2022)

Gender pay gap in unadjusted form (earn_grgpg)

Thematic section

• Labour market , see:

Earnings

Selected datasets

• Earnings , see:

Gender pay gap in unadjusted form (sdg_05_20)

Methodology

- Development of econometric methods to evaluate the Gender pay gap using Structure of Earnings Survey data (Working paper)
- Gender pay gap in unadjusted form Nace rev.2 (ESMS metadata file earn_grgpg2_esms)
- Structure of earnings survey 2018 (ESMS metadata file earn_ses2018_esms)

External links

- · European Commission Employment, Social Affairs and Inclusion Gender equality
- United Nations Economic Commission for Europe (UNECE) Gender Statistics

Legislation

- A Roadmap for equality between women and men 2006-2010 (Commission Communication SEC(2006) 275)
- Equality between women and men 2010 (Report from the Commission SEC(2009)1706)
- Strategy for equality between women and men 2010-2015 (Commission Communication COM/2010/0491 final)
- Regulation (EC) No 530/1999 of 9 March 1999 concerning structural statistics on earnings and on labour costs
- · Summaries of EU Legislation: Statistics on earnings and labour costs
- Regulation (EC) No 1738/2005 of 21 October 2005 amending Regulation (EC) No 1916/2000 as regards the definition and transmission of information on the structure of earnings

