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1. Contact

1.1. Contact organisation

National Institute for Statistics and Economic Studies (INSEE)

1.2. Contact organisation unit

DIRECTORATE OF DEMOGRAPHIC AND SOCIAL STATISTICS

Department for Employment and Earned Incomes

Wages and Labour Earnings Division

1.3. Contact name

Fabien TOUTLEMONDE

1.4. Contact person function

Head of "Wages and Labour Earnings" division

1.5. Contact mail address

TIMBRE DG75-F240 – 88 avenue Verdier – CS 70058 – 92541 MONTRouGE CEDEX – FRANCE

1.6. Contact email address

fabien.toutlemonde@insee.fr

1.7. Contact phone number

+33 6 19 52 42 21.

1.8. Contact fax number

No fax

2. Statistical presentation

2.1 Data description

The Structure of Earnings Survey 2022 (SES 2022), which was transmitted by INSEE to Eurostat on 26 June 2024 (then on 30 October 2024 in a corrected version), results from the concatenation of data from the annual Structure of Earnings Surveys (SES) 2021 and 2022 (collected in 2022 and 2023 respectively), after updating the financial or working time information collected for 2021 so that it is representative of 2022. The scope of these annual surveys covers the private sector, the local civil service and the hospital civil service.

In addition to these annual surveys, there is a complementary survey of employees in the state civil service (FPE 2022), covering the year 2022. This survey completes the scope of the ESS to cover in particular section O (Public administration), which remains optional according to the European regulations, but whose inclusion is provided for in the implementation rules 'Structure of Earnings Survey 2022; Eurostat's arrangements for implementing the Council Regulation 530/1999, the Commission Regulations 1916/2000 and 1738/2005'.

2.2 Classification system

Nomenclatures used are those indicated in the implementation rules 'Structure of Earnings Survey 2022; Eurostat's arrangements for implementing the Council Regulation 530/1999, the Commission Regulations 1916/2000 and 1738/2005'.

2.3 Sector coverage

The scope covers sections B to S of the economy according to the NACE rev. 2 classification.

2.4 Statistical concepts and definitions

Concepts and definitions of variables follow the implementation rules 'Structure of Earnings Survey 2022; Eurostat's arrangements for implementing the Council Regulation 530/1999, the Commission Regulations 1916/2000 and 1738/2005'.

2.5 Statistical unit

Statistical units are "local units" and "employees".

2.6 Statistical population

Employees and establishments belonging to a company with at least 10 employees located in France (excluding Mayotte), in sections B to S of the economy according to the NACE rev. 2 classification.

2.7 Reference area

France (metropolitan France and overseas departments, excluding Mayotte).

2.8 Time coverage

Year of reference: 2022

2.9 Base period

Not applicable

3. Statistical Processing

3.1 Source data

SES 2022 data are based on the following sources:

- annual structure of earnings surveys (ESS 2021 and ESS 2022);
- the complementary survey on state civil service employees (FPE 2022, every 4 years);
- statistical sources based on exhaustive administrative sources: all employees database (BTS), system for information on civil servants (Siasp) and the company register (Sirus).

The 2021 and 2022 annual structure of earnings surveys

"ESS" surveys are annual surveys, constituting the first part of the four-yearly cycle of surveys called "Ecmoss"¹ ("Survey on Labour Costs and Wage Structure", "Enquête sur le Coût de la Main d'Oeuvre et la Structure des Salaires" in French). Those surveys cover establishments and employees in the private sector, the hospital civil service and the local civil service.

The complementary survey on State civil service employees 2022 (FPE 2022)

The FPE 2022 survey is a survey carried out by INSEE in 2023 to complete the scope of the ESS surveys for the Eurostat response. It is carried out among employees of the State Civil Service, employees mainly working in non-market education (section P), public administration (section O) and, to a lesser extent, human health and social work (section Q).

1 Two years of "ESS" surveys on the structure of wages, followed by two years of "Ecmo" surveys on labour costs.

Statistical sources based on administrative sources

Statistical sources based on administrative sources deemed to be exhaustive are used both as a sampling frame for surveys and as sources of additional information for surveys, which allowed to reduce the burden. Those sources are the following:

The All Employees Database (Base Tous Salariés - BTS): the 'base Tous salariés' is the annual statistical file that combines information from the Nominative Social Declarations (DSN). This administrative source concerns all employees of a company receiving a salary or wage, regardless of the amount or length of employment. It is primarily intended for use by social security bodies and the tax authorities to calculate certain contributions due by employers, to monitor the payment of all their contributions and to determine employees' entitlement to retirement pensions and health insurance cover. The BTS is compiled by INSEE from the DSN, after integrity checks, conversion to statistical format (concepts), statistical checks and adjustments.

The System of Information on Civil Servants (Siasp): the 'système d'information sur les agents du service public' is an exhaustive statistical file, also compiled from information provided by the DSN, covering the 3 public services (State, Territorial, Hospital). The Siasp file is the reference source for measuring headcount, payroll and hours paid in the public sector.

The DSN is an online declaration produced every month from pay slips. It has been compulsory for all companies (established in France) in the private sector since 2017 and has gradually become compulsory for those in the public sector between 2020 and 2022. Companies enter information on each of their employees (their wages, periods of activity, etc.), which is automatically transmitted to all social bodies (France Travail, Caisse primaire d'assurance maladie, Urssaf, etc.). These informations are used to calculate the various social contributions payable by employers and employees on the one hand, and to determine the social rights thus generated for employees on the other hand (health insurance, retirement, unemployment, etc.).

The quality of the declaration of the various headings in the DSN depends directly on the stake of these regarding the objectives of collecting contributions and calculating rights mentioned above (for example, the quality of the wording of the « employee's detailed occupation », which is of minimal importance in the reporting process of the DSN, is much lower than the « wage amount », which is highly mandatory because used to calculate social security contributions).

More generally, in the DSN, only information that is useful, directly or indirectly, for the calculation and payment of social security contributions and the calculation of the rights thus generated is requested from companies. Thus, some of the information requested in the SES-LCS system may not exist in the DSN. Moreover, for various reasons, such as the existence of contribution exemption schemes, DSN data that seem to correspond a priori to what is required in the surveys, from the point of view of concepts, are ultimately unsuitable (lack of exhaustiveness).

The Company register (Sirus): the 'Système d'identification au répertoire des unités statistiques' register lists all companies and local units (establishments). It is based on the Sirene administrative register (Système informatisé du répertoire national des entreprises et des établissements) and is used to complete the sample of establishments with information not present in the DSN, such as the department or the market or non-market nature of the establishment's activity.

Those administrative sources and resulting statistical files are used upstream of the survey to define the sampling frame for establishments and employees, as well as to define the allocation of the number of establishments and employees to be sampled by stratum (see below). They also provides downstream the calibration bases (cf. 6.3.3) as well as additional information not requested in the surveys or compared with the survey responses (see point 8).

3.2 Frequency of data collection

The ESS surveys are conducted two years in a row every four years (alternating with the labour costs survey).

The complementary survey on the State civil service is conducted every four years.

Statistical databases derived from administrative data (BTS, Siasp and Sirius) provide annual information.

3.3 Data collection

The 2021 and 2022 annual structure of earnings surveys

The ESS 2021 and 2022 are employer surveys. Data is collected from March to December for each year of collection (2022 for ESS 2021 and 2023 for ESS 2022).

Establishments can answer by paper questionnaire, computer file (for large companies) or by internet via the “Coltrane” portal (for establishments with no more than 5 employees surveyed).

Establishments receive an “Establishment” questionnaire and questionnaires about one or more of their employees who are specifically named (between 1 and 24). It's therefore employers who respond to the “Employee” questionnaires.

The complementary survey on State civil service employees 2022 (FPE 2022)

The FPE 2022 survey is a survey among state civil service employees. Data collection took place from 22 May to 2 July 2023.

This time, the survey was conducted exclusively via the internet using the “Coleman” portal, unlike the 2018 FPE survey, which was conducted both via the internet and on paper.

3.4 Data validation

During collection of the ESS survey, in order to limit measurement errors, INSEE has a data checking tool in the computer application (called the “expertise batch”) that enables the monitoring of Ecmoss surveys. This IT tool makes it possible, during collection, to identify anomalies in the consistency of the data collected, so that outliers can be quickly detected and corrected by the management team. For example, it is automatically checked that items included in a global amount are lower than that amount. In addition, order of magnitude are checked using the distributions of the data from the previous survey. Thus, it is possible to detect and correct data entry and scanning errors, amounts that come from company's accounting and not from the establishment, or calculation errors by respondents that can go as far as multiplying or dividing amounts by 10.

From the sending of the questionnaire to the end of the collection of the ESS survey, a team of managers ensures the control of questionnaires, with a reminder to the companies in case of important errors. In order to avoid calling back companies too long after the return of their questionnaires, data entry takes place continuously as soon as the first responses from establishments are received.

After collection of the ESS and FPE surveys, INSEE proceed to adjustments (alignment, calibration, treatment of non-response). For the ESS, these adjustments are made in collaboration with DARES (the statistical service of the Ministry of Labour).

An in-depth validation based on comparisons with the previous edition of the survey, as well as with other administrative or survey data sources, is also carried out (see [section 8](#)).

3.5 Data compilation

Not applicable

3.6 Adjustment

* Processing used to update 2021 data

The Eurostat database contains observations surveyed for the year 2021 and others for the year 2022: earnings variables observed in 2021 are therefore adjusted (or updated) to be representative of 2022 (the so-called "ageing" of the data).

Data is usually "aged" as follows:

stratification = section A21 * company size band (10-249 / 250-999 / 1000+) * location (IdF, French overseas departments, province of mainland France)

ageing coefficient = $\text{hourly_wage_N} / \text{hourly_wage_N-1}$, from the BTS

aged data = B41, B411, B42, B421, B422, B43

Because partial unemployment remained in 2021, this method cannot be applied as it stands, since the assumption of a stable volume of work is no longer valid in the presence of short-time working arrangements.

Data ageing for the ESS 2021 is therefore carried out as follows (method used for the LCS 2020 rendering):

stratification = specially created section A21 * company size band (10-49 / 50-249 / 250-499 / 500-999 / 1,000+) * region (IdF, French overseas departments, province of mainland France)

ageing coefficient = $\text{gross_wage_N} / \text{gross_wage_N-1}$, from BTS and $\text{nb_hours_N} / \text{nb_hours_N-1}$, from BTS

aged data = B41, B411, B42, B421, B422 with changes in gross salary, S_HREM, B321 with changes in hours and recalculation of a B32 (from aged S_HREM) and a B43 (aged B42 / aged B32)

Other adjustments made to the surveys (total non-response and partial non-response adjustments) are described in [section 8](#).

4. Quality management

4.1 Quality assurance

In order to evaluate their relevance, ESS and FPE surveys are reviewed every 4 years in front of the national council for statistical information (CNIS) and the Official Statistics Label Committee. This council and this committee check the interest and statistical quality of the operation, its process, the statistical and accounting standards and the tests of the questionnaire carried out before the survey. They also ensure that consultation has taken place with the partners concerned. They provide an opinion about the opportunity of the survey and a label of general interest and statistical quality. The Label Committee may also grant a response obligation, which ensures that the survey results are more representative.

CNIS gave a favourable opinion on the ESS 2021 and 2022 surveys (opinion no. 69 of 19 May 2021) and on the FPE 2022 survey (opinion no. 74 of 7 June 2022). The Official Statistics Label Committee gave these surveys the label of general interest and statistical quality and granted them mandatory status, under visa number 2022A056EC for the ESS 2021 survey, 2023A045EC for the ESS 2022 survey and 2023X065EC for the FPE 2022 survey.

4.2. Quality assessment

Besides this *ex-ante* labelling procedure, the SES survey is also evaluated by INSEE during the results validation phases (see [section 3.4 and 8](#)). After adjustments done by INSEE and the statistical service of the Ministry of Labour (see [section 3.4](#)), INSEE proceeds to an in-depth validation of the data using comparisons with the previous edition, or with external sources (National Account, BTS, Labour cost index (LCI), see [section 8](#)).

5. Relevance

5.1 User needs

Many national stakeholders use the Ecmoss data: INSEE, the Ministry of Labour (notably the Directorate for studies and statistics, DARES), researchers.

DARES uses in particular the “Employees” section of the Ecmoss survey to answer many questions on the various components of earnings and the work time organisation (components of employees’ earnings, characteristics of employees at the minimum wage, employee savings scheme, overtime, working time, etc.). Information from these surveys is also used for the national accounting at INSEE.

Social science researchers also use this source of data on both establishments and their employees to study companies’ pay practices.

5.2. User satisfaction

Not applicable

5.3 Completeness

Every mandatory variables required by the Eurostat Regulation are provided.

5.3.1 Data completeness – rate

Not applicable

6. Accuracy and reliability

6.1 Overall accuracy

Not applicable

6.2 Sampling error

6.2.1 Sampling errors – indicators

The variance of the estimators of the mean of the variable of interest was calculated using analytical variance calculations that take into account the complexity of the sample design (two-staged stratified sampling design, concatenation of two survey years). In addition, those precision calculations take into account both the uncertainty linked to sampling and that linked to non-response.

Tables 6.1 and 6.2 below present, for SES 2022 the precision (standard deviation and coefficient of variation (CV)) for the estimators of the mean of the main variables of interest requested by Eurostat: gross earnings in the reference month and average gross hourly earnings in the reference month.

Tableau 6.1 – Precision for the gross earnings in the reference month (B42)

	Estimateur	Écart-type	CV (%)
<i>Total</i>	2 835,1	12,03	0,42
Full time – Women	2 811,3	15,91	0,57
Full time – Men	3 196,6	19,38	0,61
Part time	1 807,4	23,68	1,31
B - Mining and quarrying	3 162,9	701,64	22,18
C - Industry and manufacturing	3 116,7	32,95	1,06
D - Electricity, gas, steam and air conditioning supply	4 005,2	138,76	3,46
E - Water supply; waste management.	2 653,7	64,68	2,44
F - Construction	2 856,5	53,14	1,86
G - Trade; maintenance and repair of motor vehicles	2 603,4	39,69	1,52
H - Transportation and storage	2 655,2	49,34	1,86
I - Catering	1 986,9	78,89	3,97
J - Information and communication	4 233,2	60,49	1,43
K - Finance and insurance activities	4 203,3	74,36	1,77
L - Real estate activities	2 993,3	77,62	2,59
M - Professional scientific and technical activities	3 940,6	57,16	1,45
N - Administrative and support service activities	2 154,8	32,52	1,51
O - Public administration, defence; c. social security	2 583,1	15,3	0,59
P - Education	3 011,1	14,47	0,48
Q - Human health and social work activities	2 451,1	25,77	1,05
R - Arts, entertainment and recreation	2 886,5	170,32	5,9
S - Other unspecified services	2 298,5	109,16	4,75
1 - Managers	5 432,4	52,8	0,97
2 - Professionals	3 755,9	21,75	0,58
3 - Technicians and associate professionals	2 806,7	19,63	0,7
4 - Clerical support workers	2 028,7	18,55	0,91
5 - Service and sales workers	2 147,7	24,58	1,14
6 - Skilled agricultural, forestry and fishery workers	1 987,1	124	6,24
7 - Craft and related trades workers	2 218,2	22,67	1,02
8 - Plant and machine operators	2 259,3	27,43	1,21
9 - Elementary occupations	1 590,2	21,17	1,33
Under 20 years	986,0	38,48	3,9
20-29 years	2 029,0	18,34	0,9
30-39 years	2 788,3	19,33	0,69
40-49 years	3 088,4	22,14	0,72
50-59 years	3 176,4	23,97	0,75
60 and above	3 287,7	55,12	1,68
FR1 - Île-de-France	3 561,9	29,48	0,83
FRB - Centre-Val de Loire	2 542,6	42,52	1,67
FRC - Bourgogne-Franche-Comté	2 465,3	45,31	1,84
FRD - Normandie	2 539,6	37,65	1,48
FRE - Hauts-de-France	2 529,5	49,81	1,97
FRF - Grand Est	2 567,1	39,2	1,53
FRG - Pays-de-la-Loire	2 547,3	46,1	1,81
FRH - Bretagne	2 517,9	50,86	2,02
FRI - Nouvelle-Aquitaine	2 562,9	38,25	1,49
FRJ - Occitanie	2 589,8	40,13	1,55
FRK - Auvergne-Rhône-Alpes	2 722,6	34,56	1,27
FRL - Provence-Alpes-Côte d'Azur	2 734,6	45,38	1,66
FRM - Corse	2 683,7	306,91	11,44
FRY - DROM	2 860,3	54,98	1,92
10 – 49 workers	2 577,0	29,62	1,15
50 – 249 workers	2 795,0	26,96	0,96
250 – 499 workers	2 856,1	40,9	1,43
500 – 999 workers	2 957,8	36,42	1,23
1 000 and above workers	2 973,9	16,86	0,57

Tableau 6.2 – Precision for the average gross hourly earnings (B43)

	Estimateur	Écart-type	CV (%)
<i>Total</i>	20,0	0,07	0,35
Full time – Women	18,9	0,1	0,53
Full time – Men	21,2	0,12	0,57
Part time	17,8	0,17	0,95
B - Mining and quarrying	20,7	4,44	21,47
C - Industry and manufacturing	21,2	0,21	0,99
D - Electricity, gas, steam and air conditioning supply	27,2	0,94	3,45
E - Water supply; waste management.	18,0	0,44	2,44
F - Construction	19,2	0,33	1,72
G - Trade; maintenance and repair of motor vehicles	18,3	0,26	1,42
H - Transportation and storage	18,2	0,31	1,7
I - Catering	14,6	0,33	2,25
J - Information and communication	28,7	0,4	1,39
K - Finance and insurance activities	28,8	0,47	1,63
L - Real estate activities	20,6	0,53	2,58
M - Professional scientific and technical activities	26,7	0,37	1,38
N - Administrative and support service activities	15,6	0,17	1,09
O - Public administration, defence; c. social security	18,2	0,09	0,49
P - Education	21,6	0,09	0,42
Q - Human health and social work activities	18,0	0,17	0,94
R - Arts, entertainment and recreation	21,6	1,18	5,45
S - Other unspecified services	17,3	0,64	3,69
1 - Managers	36,9	0,34	0,92
2 - Professionals	26,5	0,15	0,57
3 - Technicians and associate professionals	19,3	0,12	0,62
4 - Clerical support workers	14,3	0,11	0,77
5 - Service and sales workers	15,3	0,13	0,85
6 - Skilled agricultural, forestry and fishery workers	12,3	0,59	4,82
7 - Craft and related trades workers	15,0	0,13	0,86
8 - Plant and machine operators	15,3	0,16	1,04
9 - Elementary occupations	12,6	0,11	0,88
Under 20 years	7,7	0,36	4,69
20-29 years	14,4	0,11	0,76
30-39 years	19,3	0,12	0,62
40-49 years	21,5	0,14	0,65
50-59 years	22,3	0,14	0,63
60 and above	24,3	0,37	1,52
FR1 - Île-de-France	24,9	0,18	0,72
FRB - Centre-Val de Loire	17,8	0,27	1,52
FRC - Bourgogne-Franche-Comté	17,4	0,26	1,5
FRD - Normandie	17,8	0,24	1,35
FRE - Hauts-de-France	18,0	0,28	1,56
FRF - Grand Est	18,1	0,25	1,38
FRG - Pays-de-la-Loire	17,9	0,28	1,56
FRH - Bretagne	17,8	0,3	1,69
FRI - Nouvelle-Aquitaine	18,0	0,23	1,28
FRJ - Occitanie	18,4	0,24	1,31
FRK - Auvergne-Rhône-Alpes	19,2	0,22	1,15
FRL - Provence-Alpes-Côte d'Azur	19,3	0,26	1,34
FRM - Corse	17,5	1,71	9,79
FRY - DROM	20,1	0,38	1,89
10 – 49 workers	18,2	0,18	0,99
50 – 249 workers	19,7	0,16	0,81
250 – 499 workers	20,2	0,26	1,29
500 – 999 workers	20,8	0,24	1,15
1 000 and above workers	20,9	0,11	0,53

6.3 Non-sampling error

6.3.1 Coverage error

Civil servants in the French armed forces are excluded from the scope of the survey².

The survey sampling for a year N is based on employees in post on 31 December N-1 (in general), so employees entering in the course of the year N are not in the scope of the survey, by construction. This lack of coverage is corrected by the final calibration on the exhaustive statistical files (BTS) of year N, at the end of the processing.

The ESS 2022 sampling frame covers 87% of the establishments in the reference population. Within the sampling frame, 8% of establishments do not belong to the reference population.

In terms of employees, 64% of positions in the ESS 2022 population of interest are covered by the sampling frame. Within the sampling frame, 9% of positions do not belong to the reference population.

Inclusion in the scope of the survey is verified during data collection (presence of the employee at the end of the reporting year) and also during the adjustment steps.

6.3.1.1 Over-coverage – rate

Final data delivered are corrected for over-coverage (by excluding the records concerned). Any coverage errors in the initial sampling frame are corrected by calibration against administrative reference data for the year in question.

6.3.1.2 Common units – proportion

Not applicable

6.3.2 Measurement error

During Ecmoss collection, the data checking tool allows consistency anomalies to be detected and quickly corrected by the management team (also see [section 3.4](#)).

The central variables of the survey (gross earnings and number of hours paid) are mainly checked with the help of individual data from the BTS and of other variables from the survey, in a consistency analysis conducted at individual level, which may lead to adjustments of the reported variables (and imputations when they're missing, see [part 6.3.3](#)).

A second adjustment is made at the end of the adjustments and imputations mentioned above to satisfy the constraints imposed by Eurostat, i.e. strict compliance with the limits for several variables (working time, valuation of overtime, for example) and the absence of partial non-response (deletion of individuals for whom certain variables remain missing after imputation).

See [section 6.3.4.1](#) for the table detailing the adjustment rates by variables and [section 6.3.3](#) detailing the imputation methods.

6.3.3 Non response error

For both ESS 2021 and 2022 surveys, as for the FPE 2022 survey, the final weighting is obtained in two steps: the initial survey weights are corrected for total non-response, and then modified by calibration.

* **Response rate**

For both ESS 2021 and ESS 2022, 319,596 questionnaires were sent out to employees and 236,780 responses were received. This represents a response rate of 74.1%.

For FPE 2022 complementary survey, 33,298 questionnaires were sent to employees, for which 21,037 responses were received. This represents a response rate of 63.2%.

² One of the reasons for this is that the data transmitted to INSEE through the military payroll files do not include addresses.

*** Treatment for total non-response**

Files are corrected for total non-response by post-stratification. When a unit is non-respondent (whether it is an establishment or an employee), its weight is reallocated homogeneously to the responding units in the same sampling stratum.

*** Treatment for partial non-response**

Eurostat does not accept partial non-response in the data transmitted. Employee and establishment questionnaires used to compile the final data are subject to treatment for partial non response (missing or incorrectly filled answers in questionnaires that are otherwise partially correctly filled in).

Central variables of the survey taken from the employee questionnaire (gross salary and number of hours paid) are checked in two ways: firstly using individual data from the BTS, and secondly using the other survey variables in a consistency analysis carried out at individual level, which may lead to adjustments of the reported variables, and to imputations when they are missing.

The main principles of adjustment operations are the following:

- The value collected by the questionnaire is kept even in case of inconsistency with the value from the BTS, as long as the answers given to the different questions of the questionnaire are consistent with each other;
- When outliers or missing values or inconsistencies within the questionnaire or with the data from the BTS are detected, some variables are adjusted by deterministic imputations with variables from the BTS, others are adjusted by modelling (statistical imputation). Consistency tests are also applied to a number of essential variables for the transmission of results to Eurostat but not directly involved in the calculation of the main parameters of interest in the survey (bonuses, overtime, etc.). Regardless of the source, earnings data are considered to be more reliable than working time data; therefore it is those latter which are modified in case of inconsistency.

Final adjustments are then made to employee data, to comply with Eurostat constraints; in particular, an imputation is made for employees paid at a flat daily rate, for whom number of hours paid must be provided, as for other employees.

For educational qualifications and length of service, imputation is carried out by hotdeck (a method of imputing values from other survey respondents with the same characteristics): same age group, working in the same sector of activity, same location (Île-de-France/province of mainland France), etc.

See **section 6.3.4.1** for the detailed table of imputation rates by variable.

6.3.3.1 Unit non-response – rate

Not applicable

6.3.3.2 Item non-response – rate

Not applicable

6.3.4 Processing error

See below

6.3.4.1 Imputation – rate

The adjustment/imputation rates are presented in **table 6.3**. They relate to the number of individuals (here, unweighted) whose response was imputed/addressed to the total number of individuals.

The high adjustment rate for variable B25 ('education') is explained by a large number of missing values, corrected by hotdeck.

The high rate of adjustment for the paid hours and hourly wage variables (B32 and B43) is mainly explained by the imputation carried out for employees paid at a flat daily rate (with administrative data) since these employees are not concerned by the survey variable on paid hours. Excluding employees paid at a flat daily rate, the adjustment/imputation rates for these variables are 11.9% for hours paid (B32) and 17.9% for hourly wage (B43).

Table 6.3 – Adjustment / imputation rate by source (in %)

Variable	ESS data	FPE data
A11	Administrative data	Administrative data
A12	Administrative data	Administrative data
A13	Administrative data	Administrative data
A14	Administrative data	Administrative data
A15	Administrative data	Administrative data
A16	Administrative data	Administrative data
A17	Administrative data	Administrative data
B21	Administrative data	Administrative data
B22	0,0	Administrative data
B23	0,0	Administrative data
B24	0,0	Administrative data
B25	26,8	0,0
B26	5,2	0,8
B27	0,0	Administrative data
B271	1,0	Administrative data
B28	0,3	Administrative data
B31	3,3	Administrative data
B32	43,0	Administrative data
B321	3,4	Administrative data
B33	3,1	20,7
B41	0,0	Administrative data
B411	6,4	Administrative data
B42	9,4	Administrative data
B421	3,5	Administrative data
B422	4,3	Administrative data
B43	46,9	Administrative data

6.3.5. Model assumption errors

Not applicable

6.4. Seasonal adjustment

Not applicable

6.5. Data revision – policy

Not applicable

6.6. Data revision – practice

Not applicable

6.6.1 Data revision – average size

Not applicable

7. Timeliness and punctuality

7.1. Timeliness

The SES 2022 data are sent to Eurostat at the end of June 2024. A second delivery is made on 30 October 2024 following receipt of the validation report.

7.1.1 Time lag – first results

First national publications produced by INSEE will be published at the beginning of 2025 (INSEE-Résultats containing tables of very detailed results and INSEE-Focus publication) and those produced by DARES (Ministry of Labour) should appear in 2025 (DARES-Analyse).

7.1.2 Time lag – final results

See above.

7.2 Punctuality

The collection schedules for ESS 2021 and 2022 (collection in 2022 and 2023) were respected.

More specifically, for ESS 2022, for example, the timetable for the conduct of the survey was as follows:

- 13 March / 14 April 2023: announcement letters phase;
- Early May 2023: paper questionnaires sent to establishments (to headquarters since ESS 2022);
- 11 May 2023: beginning of the data collection phase;
- 30 June 2023: arrival of the first reminder letters at headquarters;
- 7 and 14 September 2023: letters of formal notice sent (2 waves);
- 5 and 12 October 2023: dispatch of the statement of non-response (2 waves);
- 15 January 2024: collection closes.

From the time the questionnaires are sent out until the end of the data collection, a team of managers ensures contact and responds to requests from enterprises (answers to questions, granting of additional time, etc.).

The data coding, imputation, adjustment, calibration and validation phase then took place until the data were sent to Eurostat on 26 June 2024.

7.2.1 Punctuality – delivery and publication

See above.

8. Coherence and comparability

8.1 Comparability – geographical

The ESS and FPE surveys collect annual data. Thus, the reference month is not a specified month but corresponds to a monthly average of the data collected.

Remuneration for shift work (variable B422) is taken, for the private sector, the FPT and the FPH, from the variable S_PR_CONT in the ESS questionnaire, which covers a slightly broader field than just shift and night work, since it concerns bonuses linked to workstation constraints in general: shift and night work, but also alternating shifts, on-call duty, arduous work, etc. For the FPE, the data is taken from administrative data and corresponds to remuneration for on-call duty.

8.1.1 Asymmetry for mirror flows statistics – coefficient

Not applicable

8.2 Comparability – over time

*** Comparability between SES 2022 survey and SES 2018 survey**

- New stratification of the establishments sampling frame from the 2020 survey
The stratification used for the 2019 Ecmoss survey resulted in too many strata and made downstream processing more complex. A new stratification has been put in place for the 2020 survey and formalised for use from the 2021 survey onwards.
- Changes in the treatments of temporary workers from the 2019 survey:
In the BTS, all employees of temporary work agencies are registered in the temporary work agency establishments. From Ecmoss 2019 onwards, the number of employees in the company is calculated as the number of jobs (in the company) observed in the BTS file and no longer with the number of employees from the Sirius register.
In total, in division 78 (Employment activities), the number of establishments increases very strongly between 2016 and 2019, as does the number of employees. While part of the increase in the latter can be explained by the very strong growth in temporary work over the period, it can also be explained in part by the change in the accounting method mentioned above. The 2020 data for sector N – Administrative and support service activities – are therefore difficult to compare with the 2016 data.
- New data adjustment chain from the 2021 survey
Revision of programs to improve control of adjustment operations and simplify processing. In particular, the adjustments for the various absences and the calculation of hours paid for employees paid at a flat daily rate have been revised.
- New calculation for the number of days of B33 leave from the 2021 survey
The previous calculation was complex, produced high maximum values and raised doubts about the quality of the variable used. In addition, the deduction of RTT days from the B33 variable has been introduced for the SES 2022 return. Eurostat expects a number of days of leave excluding RTT.
- Modification of the calibration method for employee data from the 2021 survey
Until now, the method used for the Ecmoss surveys consisted of calibrating variables from the BTS observed on the sample on margins calculated from this same BTS. From the ESS 2021, the survey data from the sample of respondents are calibrated on the margins of the BTS covering the same concept.

8.2.1 Length of comparable time series

Not applicable

8.3 Coherence – cross domain

Analysis of consistency is presented in [section 8.5](#).

8.4 Coherence – sub annual and annual statistics

Not applicable

8.5 Coherence – National Accounts

Validations are based on comparisons of evolutions of hourly wages with external sources: LCI (Labour Cost Index), national accounts. Comparisons in terms of evolution between SES 2018 and SES 2022 are made here for validation purposes, but should be analysed with caution in view of all the elements specified in [point 8.2](#).

The evolution of the variables between SES 2018 and SES 2022 is compared to the evolution of the variables with the "closest" concepts present in the external sources. It should be noted that the concepts

and the scope do not completely overlap between the different sources. The main discrepancies are the following:

- **Scope:** the ESS survey covers companies with more than 10 employees, excluding employees of households/private individuals and the agriculture sector. On the other hand, other sources used here (LCI and national account) relate to the scope including companies with less than 10 employees;
- **Classification of activity:** in the ESS survey (as in the LCI), it is based on a concept of sector of activity (grouping of establishments according to their main activity) whereas in the national accounts it is based on a concept of branch (grouping of units of economic activity close to each other: one can therefore have several units of activity of the same company in different branches). This difference can therefore explain differences between sources at the level of the various activities but not at the overall level;
- **Concepts of wages:**
 - > In the national accounts, the calculated payroll includes larger concepts than those taken into account in the SES (e.g. tips, earnings of directors of companies with a majority shareholding). These conceptual differences may explain discrepancies in some sections (e.g. accommodation, food service activities and construction).
 - > The LCI does not take into account remunerations outside the social contribution base (i.e. exempt from social security contributions but not from CSG-CRDS) such as employee savings schemes.

* **Comparison of wages**

Eurostat requests a comparison for SES of the variable 'gross annual earnings in the reference year' (B41), expressed per employee, and the variable 'wages and salaries' (D11), per employee, from the national accounts. The results are presented in **Figure 8.1**.

Figure 8.1 –Comparison of annual wages per employee (SES – NA)

	2018	2022	Evol %	Diff (pt %)
SES	31 731,0	33 878,0	6,8%	-2,4
NA	34 795,8	37 989,8 (p)	9,2%	

(p): provisional

As part of the data validation process, the following factors are also taken into account.

The average monthly hourly wage will be €20.0/hour in 2022, compared with €18.0/hour in 2018, representing a four-year change of 11.1% (see **Figure 8.2**). This change is the same as the one observed in the labour cost index – hourly wage (ICT-sh) for the entire scope (see **figure 8.3**), and slightly more dynamic than the one observed for the average wage per employee (SMPT, +9.2%).

Hourly wages for full-time jobs are higher than those for part-time jobs (€20.2 compared with €17.8). This is especially true for women. The small difference in hourly pay between full-time and part-time men is due to the characteristics of part-time men, and in particular the presence of part-time doctors in hospitals, which pushes up hourly pay. Excluding the executive x section Q x Hospital Civil Service cross-over, the average hourly wage (in the Ecmoss scope) is €20.1/hour for part-time men, compared with €20.9/hour for full-time men.

The more moderate rise in hourly wages for part-time men is due in particular to the fact that hourly wages for this population were too high for SES 2018.

Figure 8.2 – Evolution of hourly wages between SES 2018 and SES 2022, by age, gender and working hours [data weighted by B52]

B22	B21	B27	SES 2022 Average salary #1	SES 2022 Average salary #2	SES 2018 Average salary #1	SES 2018 Average salary #2	Difference 22/18 Average salary #1	Difference 22/18 Average salary #2
Total	Total	Total	19,9	20,0	17,9	18,0	11,1%	11,1%
Total	Total	Full time	20,2	20,2	18,2	18,4	11,1%	9,8%
Total	Total	Part time	17,9	17,8	16,5	15,8	8,5%	12,7%
Total	Men	Total	21,2	21,2	19,4	19,5	9,4%	8,7%
Total	Women	Total	18,4	18,6	16,3	16,4	13,1%	13,4%
Total	Men	Full time	21,3	21,2	19,4	19,6	9,6%	8,2%
Total	Men	Part time	21,0	20,8	19,7	18,0	6,5%	15,6%
Total	Women	Full time	18,9	18,9	16,6	16,8	13,8%	12,5%
Total	Women	Part time	16,9	16,8	15,5	15,2	8,8%	10,5%
Under 30 years	Total	Total	14,0	14,0	13,3	13,2	5,2%	6,1%
30-39 years	Total	Total	19,3	19,3	16,6	16,8	16,3%	14,9%
40-49 years	Total	Total	21,4	21,5	18,8	19,1	13,6%	12,6%
50-59 years	Total	Total	22,1	22,3	19,4	19,6	13,7%	13,8%
60 and above	Total	Total	24,4	24,3	22,9	22,9	6,5%	6,1%

SES 2022 – Average salary #1: Average individual hourly salaries B43 – on the Eurostat field – table EARNINGS_SESB_A4 (2022)

SES 2022 – Average salary #2: Average hourly wage B42/B32 – on Eurostat field – table EARNINGS_SESB_A4 (2022)

SES 2018 – Average salary #1: Average individual hourly earnings B43 – on Eurostat field – table EARNINGS_SESB_A4 (2018)

SES 2018 – Average salary #2: Average hourly earnings B42/B32 – on Eurostat field – table EARNINGS_SESB_A4 (2018)

Figure 8.3 – Evolution of hourly wages between 2018 et 2022 for SES (average hourly wage), 'ICT-sh' and 'SMPT', by section

	SES 2022 Average salary #2	SES 2018 Average salary #2	Difference 22/18	Evol ICT-sh 22/18	Evol SMPT 22/18
B - Mining and quarrying	20,7	19,4	6,7 %	9,8 %	
C - Industry and manufacturing	21,2	19,3	9,8 %	9,5 %	3,9 %
D - Electricity, gas, steam and air conditioning supply	27,2	23,4	16,2 %	8,9 %	
E - Water supply; waste management.	18,0	16,4	9,8 %	11,5 %	
F - Construction	19,2	17,9	7,3 %	11,5 %	4,2 %
G - Trade; maintenance and repair of motor vehicles	18,3	16,4	11,6 %	10,3 %	9,0 %
H - Transportation and storage	18,2	17,4	4,6 %	10,8 %	5,1 %
I - Catering	14,6	13,6	7,4 %	12,7 %	-0,5 %
J - Information and communication	28,7	24,8	15,7 %	8,7 %	10,0 %
K - Finance and insurance activities	28,8	25,0	15,2 %	12,6 %	14,7 %
L - Real estate activities	20,6	17,9	15,1 %	17,6 %	6,3 %
M - Professional scientific and technical activities	26,7	24,0	11,3 %	7,7 %	
N - Administrative and support service activities	15,6	14,8	5,4 %	9,3 %	
O - Public administration, defence; c. social security	18,2	16,5	10,3 %	10,6 %	
P - Education	21,6	19,9	8,5 %	7,5 %	
Q - Human health and social work activities	18,0	15,2	18,4 %	16,0 %	
R - Arts, entertainment and recreation	21,6	19,8	9,1 %	10,9 %	
S - Other unspecified services	17,3	15,1	14,6 %	9,9 %	
BN – Business economy	20,6	18,8	9,6%	10,4%	
BE – Industry (except construction)	21,4	19,4	10,3%	9,5%	4,1%
DE - Energy, water, waste	22,4	19,9	12,6%	9,8%	5,6%
F - Construction	19,2	17,9	7,3%	11,5%	4,2%
GN – Market services	20,5	18,7	9,6%	10,8%	
MN – Business services	20,3	19,0	6,8%	8,4%	11,4%
OQ – Non-market services	18,8	16,7	12,6%		11,9%
RS - Arts, entertainment, other services	19,3	17,1	12,9%		
OS – Non-market services	18,8	16,7	12,6%	12,3%	
BS – Total	20,0	18,0	11,1%	11,1%	9,2%

* Evolution of the workforce

Figure 8.4 – Evolution of the number of job positions between SES 2018 and SES 2022

	SES 2022		SES 2018		Diff. 22/18
	Sum	%	Sum	%	
BN – Business economy	13 023 365	63 %	11 989 260	61 %	8,6%
BE – Industry (except construction)	2 841 195	14 %	2 806 693	14 %	1,2%
DE - Energy, water, waste	369 523	2 %	357 331	2 %	3,4%
F - Construction	984 878	5 %	878 399	4 %	12,1%
GN – Market services	9 197 292	44 %	8 304 168	42 %	10,8%
MN – Business services	3 055 308	15 %	2 560 959	13 %	19,3%
OQ – Non-market services	7 201 631	35 %	7 089 069	36 %	1,6%
RS - Arts, entertainment, other services	496 382	2 %	474 104	2 %	4,7%
OS – Non-market services	7 698 013	37 %	7 563 173	39 %	1,8%
BS – Total	20 721 379	100 %	19 552 433	100 %	6,0%

8.6 Coherence – internal

Analysis of consistency is presented in [section 8.5](#).

9. Accessibility and clarity

9.1 News release

Not applicable

9.2 Publication

The SES 2022 survey will be the subject of national publications by INSEE (INSEE-Résultats containing tables of very detailed results, INSEE-Focus) and by the statistical service of the Ministry of Labour (DARES) in 2025.

9.3 On-line database

Data are available and can be consulted on the Eurostat website.

9.3.1 Data tables – consultations

Not applicable

9.4 Micro-data access

A file of anonymised individual SES 2022 data for France will be made available to researchers via the Eurostat data center.

At INSEE, different individuals files are made available:

- Each annual ESS survey is made available to the Public Statistical Service (INSEE and the ministerial statistical services) for statistical purposes;
- Production and Research Files at the "employee" level for the ESS are made available to researchers via the Quêtelet center; not only are these files anonymised, but in order to guarantee confidentiality as much as possible, some variables are not available or provided at an "aggregated" format (more aggregated level of the nomenclature, for example for the sector of activity). More complete files are also made available to researchers via the CASD (Remote Secure Data Access Centre, a French "datacenter" ; "Centre d'Accès Sécurisé à distance aux Données" in French) and after the agreement of the French Statistical Confidentiality Committee.

These files will be available in late 2024/early 2025.

9.5 Other

Not applicable

9.6 Documentation on methodology

The ESS surveys are part of the Ecmoss system (which combines the ESS structure of earnings survey and the Ecmo labour cost survey); this system is described on the INSEE website (<https://www.insee.fr/fr/metadonnees/source/serie/s1221> in French³) and on the National Council for Statistical Information (CNIS) website (see [section 9.7](#)).

The FPE surveys is also described on the INSEE website (<https://www.insee.fr/fr/metadonnees/source/s1263> in French) and on the CNIS website.

9.7 Quality documentation

Opinions of opportunity and labels of general interest and statistical quality as well as the granting of mandatory status delivered by the Label Committee can be consulted on the CNIS website.

For the ESS 2021 and 2022 surveys:

<https://www.cnis.fr/enquetes/enquete-sur-le-cout-de-la-main-doeuv-re-et-la-structure-des-salaires-ecmoss-cycle-2022-2025-2024a032ec/>

For the FPE 2022 surveys:

<https://www.cnis.fr/enquetes/enquete-aupres-des-salaires-de-letat-en-2022-fpe-2022-2023x065ec/>

9.7.1 Metadata – consultations

Not applicable

9.7.2 Metadata completeness – rate

Not applicable

10. Cost and Burden

In ESS, establishments are surveyed for an average of 9 employees. The average response time is estimated at 20 to 25 minutes on average for the establishment questionnaire and 20 to 25 minutes per employee questionnaire.

For the FPE survey, the average time taken to complete the questionnaire is estimated at around 20 minutes.

11. Confidentiality

11.1 Confidentiality – policy

The data from the ESS surveys are protected by statistical secrecy and are intended for INSEE and DARES (the statistical service of the Ministry of Labour). The data from the FPE surveys are protected by statistical secrecy and are intended for INSEE and DEPP (the statistical service of the Ministry of Education).

These responses, as well as the data obtained by matching, are kept for 5 years from the end of the collection for the purposes of the survey. They will be archived beyond this period. At all times, their use and access are strictly controlled and limited to the compilation of statistics or to scientific or historical research.

The General Regulation 2016/679 of the European Parliament and of the Council of 27 April 2016 on data protection (RGPD) as well as the (French) law n°78-17 of 6 January 1978 on data processing, files and

3 <https://www.insee.fr/en/metadonnees/source/serie/s1221> for the English version

freedoms apply to these surveys. For personal data, a right of access, rectification, deletion or limitation of processing may be exercised during the 6-month retention period for identification data.

11.2 Confidentiality – data treatment

Not applicable

12. Comment

Nothing to report