

## **Synthesis of Quality Reports - Structure of Earnings Survey (SES) 2010**

*Commission Regulation (EC) No 698/2006 of 5 May 2006  
Implementing Council Regulation (EC) No 530/1999 as regards quality evaluation of  
structural statistics on labour costs and earnings*

### **1. Relevance**

Relevance denotes the degree to which statistics meet current and potential users' needs. It refers to whether all statistics that are needed are produced and the extent to which concepts used (definitions, classifications, etc.) reflects user needs.

Among others, the most important and frequent users of SES are mainly; research centres, universities and students, the media, social partners and trade unions, private companies, national public institutions as well as international institutions.

The large sample size of the SES makes it a unique source of information in which individual earnings can be linked with the characteristics of individual employees (sex, age, education level etc.) as well as to the characteristics of the enterprise they work for (economic sector, size of the enterprise, location etc.).

The SES tables published on Eurostat's website are considered to be well followed by our users as between October 2012 and April 2013, the number of hits associated to the SES2010 (earn\_ses10) datasets recorded an average of 1500 hits each month. Datasets providing information on earnings by sex, economic activity and collective pay agreement as well as earnings in quantiles are the most looked for, with information on earnings by level of education and geographic location to a lower extent.

### **2. Accuracy**

Accuracy in the general statistical sense denotes the closeness of computations or estimates to the exact or true values of the variables under consideration.

#### **2.1. Sampling Errors**

##### *2.1.1. Sampling technique*

In the majority of the countries, a two-stage stratified sample technique is adopted; first a random sample of enterprises / local units, followed by a sample of employees within the selected enterprise / local unit. Some exceptions are highlighted below:

In Denmark, data is collected in a census of public and private sector enterprises with 10 employees and more.

In Germany, results of NACE Rev.2 Sections O and P (partially) are based on model-based estimations.

In Hungary, the compulsory yearly Structure of Earnings Survey, with May being the reference month, includes a sample of employees working in enterprises with more than 50 employees, a 20% random sample of employees working in enterprises with less than 50 employees as well as 8% representative sample of micro enterprises.

In the case of Ireland and the Netherlands, the Structure of Earnings Survey 2010 is based purely on administrative data.

### 2.1.2. *Different sources used*

- BE: Three important administrative sources were used: national registers of enterprises and individuals as well as national social security earnings and working hours database. A standard questionnaire was additionally used for information not available from administrative sources.
- BG: Sampling frame was taken from the local units available in the business register.
- CZ: Three sources were mainly used; the quarterly business sphere, the half-yearly non-business sphere, and ad-hoc survey on micro enterprises.
- DE: Except for NACE Sections O and P (partially), which are acquired from work force statistics estimations, the source of SES is a specific survey.
- EE: All data is acquired from a specific survey. No data from administrative sources used.
- IE: SES data is acquired from the annual National Earnings Survey (NES).
- EL:
- ES: The framework of the SES is obtained from employees on the list of the Social Security General Register of Contributions Accounts and their employers.
- FR: The main sources used in gathering data were the annual “Declarations Annuelles des Donnees Sociales” (DADS, 2009) for the private sector and the “Systeme d’Information sur les Agents des Service Publics” (SIASP) for the public sector.
- IT: A mixture of sources between direct survey and administrative data was used.
- CY: SES 2010 was based on probability sampling and thus no lack of precision due to non-probability sampling occurred.
- LV: The CSB Statistical Business Register holds information on all enterprises registered in Latvia, from which the enterprise sample and sub-sample of employees are chosen.
- LT: Sampling frame is selected from the list of local units / enterprises on the Statistical Register of Economic Entities.
- LU: Information on wages and hours worked are obtained from social security records.
- HU: The main source of information comes from the central payroll system.
- MT: For private sector employees, where matching information between the Business Register and the Public Employment Office (PES) was available, administrative sources were used. All public service employees were included since information was obtained directly from administrative sources.
- NL: SES 2010 data is gathered from a combination of three administrative sources; the population register (PR), the Labour Force Survey (LFS) and the Annual Survey on Employment and Earnings (ASEE).
- AT: Sampling frame is selected from the list of enterprises on the business register and data from the Social Security for the selection of the employees.
- PL: SES data is derived from local units selected from the Business Register.
- PT: A combination of administrative sources and specific surveys are used.
- RO: Except for the setting-up of the frame population, no data from registers was used.

- SI: Collection of data was mainly done using a combination of existing sources, the SRDAP and a specific questionnaire.
- SK: The SES is derived from a quarterly statistical sample survey on average earnings.
- FI: Public sector data is collected from administrative sources whereas private sector data are collected by the Finnish employer organisations supplemented with a specific sample survey conducted by Statistics Finland.
- SE: The sample for the private sector is drawn from the Business Register. Data is primarily acquired from the yearly earnings survey, with the exception of a specific survey to collect annual bonuses. Public sector data is acquired from the Swedish Agency for Government Employers (SAGE) and the Swedish Association of Local Authorities and Regions (SALAR).
- UK: SES data is taken from the Annual Survey of Hours and Earnings (ASHE).
- IS: Data is gathered from the Icelandic Survey on Earnings, Wages and Labour Cost (ISWEL).
- NO: The statistics are constructed by compiling several separate sample surveys which are subject to possible errors due to the sampling methods applied.
- CH: The basis for sampling was enterprises active in the month of August 2010 according to the Swiss Business and Enterprise Register. Whereas for enterprises with 20 employees or more a selection of employees is chosen, for those with less than 20 all employees have to be reported in the survey.
- HR: No information has been documented.
- MK: The enterprises which are selected from the Statistical Business register are asked to select a proportion of employees, depending on their total number of employees.
- TR: Data is acquired from local units identified in the annually updated Business Register.

### *2.1.3. Coefficient of variation*

*See Annex.*

## 2.2. Non-sampling errors

### *2.2.1. Coverage errors*

- BE: No differences between the reference and study population can be mentioned.
- BG: Under-/Over-coverage occurred due to newly emerging companies or closing down of companies (respectively) at the time of drawing the sample.
- CZ: Coverage errors have been eliminated by the new system of data collection.
- DK: The continuous updating of the business register prevents particular problems in acquiring close to complete coverage.
- DE: Over coverage (6.3%) is due to inactive enterprises. Employees with extreme high income are under covered. NACE Section P covers only 70% as most non-public employers have less than 10 employees.
- EE: The sample frame (updated in 2009) contain an element of under-coverage due to delay between sample selection and data collection and some over-coverage due to new-born enterprises after 2009.
- IE: Due to the fact that only enterprises with three employees or more were selected, some professional sectors such as doctors, solicitors etc. may be under represented.
- EL:

- ES: Employees are identified by their affiliation number within the local unit during the reference year. The problem is with apprentices due to their particular type of contract which are registered under a different type of affiliation register with different characteristics than the general file for employees.
- FR: Enterprises with less than 10 employees have not been covered by the survey.
- IT: An update of the list of population has been made in order to take into account; new units which were either left out of scope (1%), others which were added wrongly due to wrong address (4.7%) and others which had change of status (2.5%) in the sample.
- CY: Coverage errors occur due to misclassifications (incorrect classification of units that belong to the target population); under coverage (new-born enterprises or enterprises which are excluded from the sample) and over-coverage due to duplications of units or others which from sampling to data collection closed down or became inactive.
- LV: The only reason for under-coverage (2%) is due to the time lag of one year between when the sampling frame is drawn and when the actual sampling was done.
- LT: Under and over-coverage were assumed to be negligible since the sampling frame was constructed at the end of the reference period.
- LU: Whereas no problem of under-coverage is known, over-coverage stem from a discrepancy between the administrative files used for sampling and the real world.
- HU: Over-coverage may happen due to misclassification of the number of employees by bands whereas under-coverage is the result of births and mergers of new units.
- MT: Coverage errors occur due to misclassification of NACE or size class assigned to the units in the target population, and over-coverage errors of units which were included in the sample when it was drawn but which were no longer active at reference period.
- NL: The time lag in updating the register may cause minor elements of misclassification, under-coverage or over-coverage which do not influence SES outcomes.
- AT: The low rate of over coverage is due to inactive enterprises or employees not working anymore for the enterprise or not having a salary in the reference month. Under-coverage is due to exclusion of enterprises in NACE O to R from the sample.
- PL: Over coverage errors (1.9% of selected sample) relate to units which are present in the frame at time of sampling but which do not belong to the target population or do not exist in practice. Under coverage elements occur due to birth of new units between time of sampling and actual data collection.
- PT: Due to the fact that the sampling frame is continuously updated, coverage errors for the private sector have no meaning whereas public sector units do not have considerable changes in the short run.
- RO: The main over / under coverage problems are related to the information quality concerning size class of enterprise by number of employees.
- SI: On total there was 5.5% (among business entities) and 1.9% (among employees) of over coverage. Under coverage was not detected.
- SK: The coverage errors were caused by inaccurate data which were provided by the statistical units to the Registers of organisations and establishments.
- FI: Since the survey frame refers to the middle of the reference year, some non-existing enterprises were included whereas some new / growing enterprises were not included at time of collection, reference month being October.
- SE: The reference month surveyed is September 2010, which is considered to better reflect the target population.
- UK: Areas of under coverage are explored because of some small number of low-paid jobs that do not operate PAYE scheme, and which are hence not on the PAYE register.

- IS: Despite the fact that the ISWEL does not yet include economic activities I, L, M, N and S, full economic coverage may lack precision. As the ISWEL is based on the “Pay As You Earn” (PAYE) register, errors in NACE classification of the latter can have an impact on the ISWEL survey coverage.
- NO: Errors in stratification variables, NACE activity and number of employees in the frame population could be a source of error. In order to control this potential error, local units in the sample are asked to control to pre-printed code of activity on the form and correct it if this is believed to be incorrect.
- CH: A limited influence of under-coverage exists with regard to economic activity, size of enterprise and specific categories of employees.
- HR: No information has been documented.
- MK: In order to avoid possible rate of over / under coverage, which may happen because of births, deaths, mergers and de-mergers of old units within the selected sample, the latest version of the sampling frame was used.
- TR: Over coverage occurred due to dead units (44%), units without any employees (45%), NACE section being out of scope (1.6%) and other reasons (9.3%). Information on under coverage is not possible to obtain since no external sources are used to compare the frame information.

### 2.2.2. *Measurement and processing errors*

- BE: Several aggregated and inconsistency checks were integrated in the data collection tools, which were solved by following them up with the local units concerned.
- BG: While the electronic version of the questionnaire was facilitated with integrated data validation and plausibility checks and dialog boxes in order to facilitate respondents' life, respondent units were directly contacted when issues of completeness, compliance and consistency arose.
- CZ: Data was checked at the data entry point when users had to install special software on their computers. In case of any mistakes, data providers were contacted directly via telephone or e-mail. Further checks are done within the NSI during data processing.
- DK: When inadequate and erroneous data is detected, enterprises are contacted.
- DE: Errors were minimised since the questionnaires were well organized and supported with explanations. The use of a social security key also avoided wrong and improper coding of ISCO and ISCED.
- EE: Logic tests were applied in order to identify all errors of magnitude. The variables which needed most corrections were the occupation code, overtime hours, holiday leave days in October, days not worked but paid, earnings in relation to overtime hours and number of hours worked and paid days to which the gross annual earnings relate. These errors were followed up with respondents and corrections were made.
- IE: Measurement errors are not applicable as information is acquired from administrative sources which are corrected at source.
- EL:
- ES: Questionnaires undergo a series of error-detecting checks with more than 400 rules.
- FR: A series of logical controls have been integrated in in-built software that monitors the incoming data. This software ensures data consistency (detecting outliers) and orders of magnitude before data is sent for further checking by Eurostat.
- IT: In addition to the structured scheme of controls established in the data collection process (web questionnaire) in order to avoid missing mandatory information, further logical as well as data processing controls were applied.

- CY: In addition to explanatory notes which supported the questionnaire, data was collected by trained interviewers to minimise errors. Nevertheless consistency checks were designed to identify any inconsistencies in the data.
- LV: Validation programs including a series of arithmetical and logical controls were established in addition to detailed instructions supplemented with the questionnaire.
- LT: 75% of respondents sent their data through electronic questionnaire which was validated by statisticians applying arithmetical and logical controls.
- LU: A minor amount of measurement errors were detected, which nonetheless were followed-up and corrected directly with the local units concerned.
- HU: Measurement errors are checked through logical checks and amended through a lengthy and thorough process.
- MT: Incoming questionnaires were checked thoroughly by trained statisticians using a number of validations and consistency checks.
- NL: For grossing up of the SES, data from the Annual Survey on Employment and Earnings (ASEE) was used.
- AT: In addition to detailed explanatory notes attached to the questionnaire, the web-questionnaire included plausibility controls. A hotline service was also established.
- PL: Detailed explanatory notes are attached to the questionnaire in order to increase clarity. Errors consist mainly of misunderstanding / misinterpretation of questions from the respondents' side and wrong figures inputted in the computer system which are identified and corrected through arithmetical and logical controls.
- PT: No major errors exist as enterprises are used to this survey and have good knowledge of the classifications involved. The electronic survey did not allow for non-response and hence the imputation rate for demographic variables and wages is zero.
- RO: In addition to detailed explanatory notes annexed to the questionnaires, other IT applications were established for further checking to identify any kind of errors. Certain variables were also compared to data from other sources. Plausibility checks also followed and where necessary, errors were corrected.
- SI: Hard mistakes were detected and corrected by the companies themselves, soft mistakes were followed up and data was double checked with the same companies.
- SK: The data are evaluated and revised on the basis of global and plausibility checks in accordance with Eurostat's implementing arrangements.
- FI: Validation has been mainly based on imputation of missing or conflicting variables, which share has been insignificant.
- SE: Besides the questionnaire, respondents receive guidance with explanations including FAQs and contact information for further help. All data has been validated through logical tests and respondents were contacted to validate errors and correct data.
- UK: Missing data for key variables are imputed on the basis of shared characteristics with imputation 'donors'. A range of validation cheques are applied to identify potential errors in the data collected.
- IS: Small non-response errors can occur due to technical errors, when certain business units are unable to provide data for a period of time, or human errors, in which case transfers are eliminated from the dataset.
- NO: Measurement errors which may arise due to lack of information or difficulty from the respondents' side in calculating a particular value are identified and corrected by logical automated computer controls as well as manual checks for outliers.
- CH: Following first-hand manual controls, plausibility of data was further checked by means of electronic tools.

- HR: No information has been documented.
- MK: Since the SES was conducted for the first time, most errors (in particular for monthly and annual earnings) were followed-up and corrected in the post-data collection phase.
- TR: Incoming data was validated through consistency checks and further checked against Eurostat's validation rules.

### 2.2.3. *Non-response errors*

*See Annex.*

### 2.2.4. *Model assumption errors*

No assumptions were made or modelling information was given for the non-listed countries.

- DK: Since earnings data are collected for a full year, some assumptions are made:  
 An employee switching from one local unit to another, half-way through the year is double counted working as 26.07 weeks instead of 52.14 (once). In this case, the employee should not be taken into account when comparing data across countries;  
 The number of hours paid, earnings related to overtime and special payments for shift work in the reference month are calculated from the earnings register in which yearly data is assumed to be equally divided throughout all the months of the year;  
 Full-time ( $\geq 29.91$ ) and part-time employees ( $< 29.91$ ) are distinguished on the basis of their hours worked;  
 With regard to information on collective pay agreement, whereas most enterprises in Denmark are members of either the Confederation of Danish employers or the Danish employers' association for the financial sector, of which all are covered by a collective agreement at an industry level (B), the remaining ones are subject to further estimations as reported in the detailed national country report.
- DE: For NACE O and P data corresponds to June 2010 except that gross monthly earnings have been estimated for October (reference month). Taxes and contributions have been imputed. Overtime and shift work have been filled as "0" because they could not be derived or calculated with adequate quality. The size class "1000+" has been assumed as there are only employees within the public service.
- EE: The main error is probably made by assuming that the distribution of non-respondents is similar to that of respondents.
- IE: The NES 2010 hours worked were unchanged to 2009, but the earnings have been adjusted to follow Revenue Commissioners income trends.
- CY: No imputations were employed but the grossing-up factors were adjusted in order to correct for unit non-response.
- LV: All local units within same stratum were assigned equal design weights and which weights were adjusted using the response level in each stratum.
- NL: No adjustments or assumptions are made.
- SE: Reference month in Sweden is September, which is considered to be a representative month since it does not include public holidays or lot of absences due to vacation.
- UK: Since respondents in higher earning occupations are less likely to respond, a weighting system based on 108 weighting classes is applied.
- NO: In addition to October, the month of September is also chosen as a reference month as both are considered to be stable in terms of wages and less affected by holidays.

### 3. Punctuality and timeliness

Punctuality refers to the time lag between the release date of data and the target date when it should have been delivered, for instance with reference to dates announced in official release calendars, laid down by Regulations or previously agreed among partners.

<b>Countries sending their data to Eurostat according to the deadline as stipulated by the COUNCIL REGULATION (EC) No 530/1999 of 9 March 1999 (18 months from the end of reference year)</b>	
Data delivered to Eurostat <u>before</u> 30th June 2012	BE, CZ, DK, DE, EE, ES, LT, LU, HU, AT, RO, SI, SK, FI, SE, TR, NO and CH
of which <u>revisions</u> were sent in following months	BE, DE, EE, ES, LU, HU, AT and SK (1 revision) SI (2 revisions) CZ (3 revisions)
Data delivered to Eurostat <u>after</u> 30th June 2012	BG, IE, FR, IT, CY, LV, MT, NL, PL, PT, UK, HR, MK and IS
of which <u>revisions</u> were sent in following months	FR, IT, CY, PL, PT, UK and IS (1 revision) IE, LV, MT and HR (2 revisions) NL (3 revisions)

### 4. Accessibility and clarity

Accessibility refers to the physical conditions in which users can obtain data: where to go, how to get access, delivery time, convenient marketing conditions (copyright, etc.), availability of micro or macro data, various formats and data carriers (paper, files, CD-ROM/DVD, Internet), etc.

Belgium	Results are available on: <a href="http://statbel.fgov.be/ses/">http://statbel.fgov.be/ses/</a>
Bulgaria	The most important tables and results are published in Bulgarian and English on: <a href="http://www.nsi.bg/otrasalen.php?otr=51">http://www.nsi.bg/otrasalen.php?otr=51</a> together with detailed methodological notes: <a href="http://www.nsi.bg/MRPDOCS/Labour_Method_4.2_2010_EN.pdf">http://www.nsi.bg/MRPDOCS/Labour_Method_4.2_2010_EN.pdf</a>
Czech Republic	National SES 2010 results are available on: <a href="http://www.czso.cz/csu/2011edicniplan.nsf/publ/3109-11-r_2011">http://www.czso.cz/csu/2011edicniplan.nsf/publ/3109-11-r_2011</a> Further publications on the yearly surveys' results are available on: <a href="http://www.mpsv.cz/cs/">http://www.mpsv.cz/cs/</a> and <a href="http://www.ispv.cz/">http://www.ispv.cz/</a>
Denmark	The most detailed statistics on SES are published in "Statistiske Efterretninger" (Statistical News) series on: <a href="http://www.dst.dk/da/">http://www.dst.dk/da/</a> and <a href="http://www.dst.dk/en/Statistik/dokumentation/Declarations/structure-of-earnings.aspx">http://www.dst.dk/en/Statistik/dokumentation/Declarations/structure-of-earnings.aspx</a>
Germany	All relevant information is available on: <a href="https://www.destatis.de/DE/Startseite.html">https://www.destatis.de/DE/Startseite.html</a>

Estonia	Results and metadata are made available on: <a href="http://www.stat.ee/">http://www.stat.ee/</a>
Ireland	Details on the NES survey are available on: <a href="http://www.cso.ie/en/index.html">http://www.cso.ie/en/index.html</a> and <a href="http://www.cso.ie/en/releasesandpublications/earnings/">http://www.cso.ie/en/releasesandpublications/earnings/</a>
Greece	
Spain	Results and methodological documents are available for free on: <a href="http://www.ine.es">http://www.ine.es</a>
France	SES and annual ECMOSS results are available on: <a href="http://www.insee.fr/fr/methodes/default.asp?page=sources/sou-enq-ecmoss.htm">http://www.insee.fr/fr/methodes/default.asp?page=sources/sou-enq-ecmoss.htm</a>
Italy	Dissemination of the SES 2010 main results are available on: <a href="http://www.istat.it/it/archivio/83362">http://www.istat.it/it/archivio/83362</a>
Cyprus	Results are published under the labour statistics theme on: <a href="http://www.cystat.gov.cy/mof/cystat/statistics.nsf/index_gr/index_gr?OpenDocument">http://www.cystat.gov.cy/mof/cystat/statistics.nsf/index_gr/index_gr?OpenDocument</a>
Latvia	Selected tables of the data collection were published on: <a href="http://www.csb.gov.lv/">http://www.csb.gov.lv/</a>
Lithuania	Results are available for free on: <a href="http://db1.stat.gov.lt/statbank/default.asp?w=1280">http://db1.stat.gov.lt/statbank/default.asp?w=1280</a> In addition to an SES publication: <a href="http://www.stat.gov.lt/en/catalog/viewfree/?id=2061">http://www.stat.gov.lt/en/catalog/viewfree/?id=2061</a>
Luxembourg	Complete set of results are available on: <a href="http://www.statistiques.public.lu/fr/publications/series/bulletin-statec/index.html">http://www.statistiques.public.lu/fr/publications/series/bulletin-statec/index.html</a> as well as a news release on: <a href="http://www.statistiques.public.lu/fr/actualites/index.html">http://www.statistiques.public.lu/fr/actualites/index.html</a>
Hungary	The most important results are available for free on: <a href="http://www.munka.hu/">http://www.munka.hu/</a>
Malta	Results are published in the form of a news release and disseminated on: <a href="http://www.nso.gov.mt/site/page.aspx">http://www.nso.gov.mt/site/page.aspx</a>
Netherlands	Results are accessible via the electronic databank of Statistics Netherlands on: <a href="http://statline.cbs.nl/StatWeb/publication/?VW=T&amp;DM=SLNL&amp;PA=71498NED&amp;D1=a&amp;D2=a&amp;D3=4,9-22&amp;D4=0&amp;HD=090325-1229&amp;HDR=T&amp;STB=G1,G2,G3">http://statline.cbs.nl/StatWeb/publication/?VW=T&amp;DM=SLNL&amp;PA=71498NED&amp;D1=a&amp;D2=a&amp;D3=4,9-22&amp;D4=0&amp;HD=090325-1229&amp;HDR=T&amp;STB=G1,G2,G3</a>
Austria	Results are available on: <a href="http://www.statistik.at/">http://www.statistik.at/</a>
Poland	Publication on "Structure of wages and salaries by occupations in October 2010" is available on: <a href="http://www.stat.gov.pl/gus/5840_3748_PLK_HTML.htm">http://www.stat.gov.pl/gus/5840_3748_PLK_HTML.htm</a>
Portugal	Results are disseminated and a Publication is available on: <a href="http://www.ine.pt/xportal/xmain?xpid=INE&amp;xpgid=ine_main">http://www.ine.pt/xportal/xmain?xpid=INE&amp;xpgid=ine_main</a>
Romania	SES 2010 data were disseminated through a press release, containing the main results, conclusions and relevant methodological explanations on: <a href="http://www.insse.ro/cms/rw/pages/index.ro.do">http://www.insse.ro/cms/rw/pages/index.ro.do</a>
Slovenia	Data and more detailed results are published on: <a href="http://www.stat.si/eng/index.asp">http://www.stat.si/eng/index.asp</a>
Slovakia	The annual publication including metadata are available on <a href="http://www.statistics.sk">http://www.statistics.sk</a>
Finland	SES data are published as a statistical release twice a year on: <a href="http://www.stat.fi/">http://www.stat.fi/</a>
Sweden	Results from SES are neither published nor sent to the reporting units.
United Kingdom	Full results of the ASHE are published on: <a href="http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2011-provisional-results--soc-2010-/index.html">http://www.ons.gov.uk/ons/rel/ashe/annual-survey-of-hours-and-earnings/2011-provisional-results--soc-2010-/index.html</a>
Iceland	Data and metadata are published on: <a href="http://www.statice.is/">http://www.statice.is/</a>
Norway	Reference to the statistics are available by NACE section and for all employees on: <a href="http://www.ssb.no/english/subjects/06/05">http://www.ssb.no/english/subjects/06/05</a>
Switzerland	Except the results published by Eurostat, only data relating to the "Swiss variables" are published on: <a href="http://www.bfs.admin.ch/bfs/portal/en/index.html">http://www.bfs.admin.ch/bfs/portal/en/index.html</a>
Croatia	For further information, see: <a href="http://www.dzs.hr/default_e.htm">http://www.dzs.hr/default_e.htm</a>
Former Yugoslav Republic of Macedonia	The data including explanations and methodology are available on: <a href="http://www.stat.gov.mk/Default_en.aspx">http://www.stat.gov.mk/Default_en.aspx</a> No results are sent to reporting units included in the sample.
Turkey	The press release, selected tables and metadata are available on: <a href="http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=10718">http://www.turkstat.gov.tr/PreHaberBultenleri.do?id=10718</a>

## 5. Comparability

Comparability aims at measuring the impact of differences in applied statistical concepts and measurement tools/procedures when statistics are compared between geographical areas, non-geographical domains, or over time.

### 5.1. Geographic comparability

- BE: Data for education professionals does not include the several non-paid hours per week which professionals spend in preparing lessons and correcting exams of students.
- BG: No differences between European and National concepts and definitions.
- CZ: No information for a representative month is available in the Czech SES, but the average month is considered as more comparable with the rest of the EU countries.
- DK: Grossing-up factors for employees have been compiled on the number of employees in the enterprise/s as a whole and not the local unit as stipulated by the regulation, as information on the latter is not available in statistics Denmark.
- DE: NACE O and P may not be comparable with other Member States or regions because they are derived from model based estimations.
- EE: Classifications and definitions coincide with those as stipulated by the regulation except that in Estonia, the gross annual earnings do not include remuneration in kind.
- IE: National concepts have been defined as close as possible to European concepts.
- EL:
- ES: The only difference with national and European concepts is that apprentices are not included (since 2006) in the reference population.
- FR: Information on NUTS, SIZE and NACE variables is obtained directly from the Business Register whereas information on AGE, SEX and days PAID are acquired from the DADS survey.
- IT: No restrictions on NACE coverage were performed.
- CY: Classifications and definitions were all based according to the Regulations.
- LV: There are no differences between Latvian and European concepts.
- LT: All mandatory and some optional indicators were collected according to Regulation.
- LU: European concepts and definitions of variables have been used.
- HU: National concepts and definitions are all equivalent to the European ones. The only difference is that the Hungarian annual data is collected in May instead of October.
- MT: National concepts are in line with European concepts as stipulated by the Regulation.
- NL: There are no differences between national classification and Eurostat's classifications.
- AT: Comparability of NACE E, P, Q and R with other countries is restricted due to the underestimation because local units in these sectors whose enterprise is in NACE O are not in the sample.
- PL: Results of national SES are comparable to the international scale.
- PT: Classifications and definitions are in accordance with European requirements.
- RO: No deviations from European concepts with regard to classifications and definitions.
- SI: Apprentices were excluded due to negligible phenomena and because units would face a problem filling data. Payments paid by the employer at a reduced rate (which according to the regulation are to be excluded) were deducted from total payments. Same applies for paid hours and paid hours at a reduced rate. Holiday bonus is excluded from annual earnings data and wages in kind are not collected because these kind of payments are not treated as wage component in Slovenia.

- SK: Despite the partial differences in the wage system of the structure of earnings of the Slovak Republic, in comparison to the EU, two versions of the results are prepared and the one sent to Eurostat is comparable with the rest according to the Regulation.
- FI: Definitions applied follow European practice as closely as possible.
- SE: Due to problems with survey design, Statistics Sweden can only collect data on enterprises and not local units. However all local units in each enterprise are surveyed.
- UK: Definitions used in the UK SES meet those specified in the Regulations.
- IS: Some incoherencies with the European concepts exist due to specific characteristics of the Icelandic labour market.
- NO: The statistics comply with most mandatory points drawn up in the Regulation.
- CH: Deviations to the EU Regulation are detailed in chapter 2.2 of the national report.
- HR: The survey is conducted fully in line with EU regulations.
- MK: The only deviation to EU regulation is that variable 1.5 (Collective pay agreement) is not included in the survey because such information is not available at reporting units.
- TR: Eurostat definitions and classifications were adopted, with the exception that the month of November was used as a reference month since it is not influenced by seasonal payments and absences.

## 5.2. Comparability over time

- BE: The only comparability issue which may arise is due to the new classification of economic activity (NACE Rev.1.1 in 2006 vis-à-vis NACE Rev.2 in 2010).
- BG: The only change after SES 2002 that effects comparability was the extension in coverage to the whole economy.
- CZ: Compared to previous surveys, SES 2010 included employees working in non-profit organisations as well entrepreneurs of the households sector. Changes in the grossing-up of the entire population have been harmonised with CZSO enterprise reporting.
- DK: Differently to previous surveys, in 2010 multimedia are included under fringe benefits. The new Danish classification on occupations (DISCO-08) was used for the first time and there is no homogeneity with the previous version (DISCO-earnings). New information on the 6<sup>th</sup> holiday week payment for 2010 resulted in a higher level of absence and a higher level of earnings per hour worked in 2010. The special holiday rate which went up from 1.5% (2009) to 1.95% (2010) resulted in a higher level of holiday and public allowances in 2010.
- DE: There are no changes in definitions, coverage and methods compared to 2006.
- EE: Compared to previous SES, there are no changes in definitions, coverage and methods.
- IE: A significant change in the data provision of SES 2010 data was applied to the most recent data collection, as it was based on administrative sources for the first time.
- EL:
- ES: Since the inclusion of enterprises with less than 10 employees in 2006, a decrease in the average earnings resulted compared to previous vintages of SES. To avoid this bias, comparison should be made only for enterprises with more than 10 employees.
- FR: SES2010 was extended to cover Public administration (NACE Rev. 2 Section O).
- IT: All mandatory variables have been surveyed and provided to Eurostat.
- CY: The coverage of the survey was the same as in 2006 except that SES 2010 was coded according to the new NACE Rev. 2 and ISCO-08 classifications.
- LV: Sampling unit in 2010 (and 2006) was local unit whereas in 2002 was the enterprise.

- LT: No specific changes in definitions, coverage and methods occurred in 2010.
- LU: Coverage and sampling is the same as in 2006 (in NACE Rev.1.1) except that 2010 is classified in NACE Rev.2.
- HU: Due to the new NACE classification introduced in 2008, comparability between SES 2006 and 2010 broken down by industry level is no longer possible.
- MT: All variables for SES 2010 did not deviate from the Community legislation.
- NL: SES 2010 is based on LFS (2008-2010) as well as the ASEE 2010 which is based on a combination of “Register of persons insured under employee insurance schemes” and the “Tax register of earnings”.
- AT: The statistical unit in 2002 was the enterprise whereas in 2006 and 2010 this was changed to enterprises and local units.
- PL: SES data (for units with 10 employees or more) is comparable as from 2001 onwards.
- PT: Statistical units, definitions, methodologies and procedures are identical to previous surveys. Information on payments for shift work” was introduced in the administrative source as from 2009 whereas “payments in kind” was transmitted to Eurostat for the first time in 2010. Contrary to 2006, Public Institutions data was acquired directly from the institutions in 2010 whereas previously these were estimated.
- RO: No significant changes to the previous (2002 and 2006) surveys.
- SI: Almost all methods are the same as in 2006. Wages in kind were added in 2010.
- SK: The enlargement of the sample since 2002 resulted in higher data representativeness, comparability and completeness on the territorial basis (regional data) of SES.
- FI: Concepts and definitions were unchanged from previous SES. In 2010, data for air transport activities (not part of national data) have been formulated for the first time.
- SE: Survey design changed since 1995, hence comparison should be made with caution.
- UK: The only significant change to 2006 was the new classification of Occupations.
- IS: No major changes in methods and definitions of variables took place since 1998.
- NO: There has not been any change in definition of variables since 1997. On-going improvements in applied methods did not affect comparability.
- CH: Comparability over time is not possible as SES data was delivered for the first time.
- HR: This is not applicable as SES was conducted for the first time (reference year 2010).
- MK: Comparability over time is not possible as SES data was delivered for the first time.
- TR: Both SES 2006 and 2010 were set in accordance to the Regulations and guidelines.

## 6. Coherence

Coherence of statistics is the extent to which they can be reliably combined in different ways and for various uses. It is, however, generally easier to identify cases of incoherence than to prove coherence.

<b>Coherence with National Accounts (NA) data for variable ' Gross annual earnings.'</b>	
Belgium	The two are comparable except some deviations due to differences in target population. Whereas NA captures employees from the whole economy, SES targets only employees in enterprises with 10 employees or more.
Bulgaria	The methodological and conceptual differences between the two sources explain the minor differences between the two.
Czech Republic	See annex.
Denmark	The discrepancy between the two is mainly two-fold: SES does not include social contributions paid by the employer and the large share of part-timers' data being filtered through plausibility checks such as assumptions that part-timers have lower wage than full-timers.
Germany	The earnings of NA were lower than in SES due to exclusion of enterprises with less than 10 employees.

Estonia	See annex.
Ireland	The gross annual earnings in SES 2010 include only employees having worked 50 weeks or more in the reference year or an average of 10 hours or more per week.
Greece	
Spain	NA figures are 20-40% greater than SES because compensation of employees in NA includes employers' social contributions (not in SES).
France	Whereas the figures in both sources correspond to each other, the differences only occur due to different concepts and methodologies.
Italy	After having taken into account the closest coverage in NA, to be able to compare with SES, coherence between the two is very high. The differences are due information not captured in SES, such as tips and remuneration in kind which are captured in NA but not in SES.
Cyprus	The data from the two sources are coherent.
Latvia	Disparities occur due to methodological differences; SES includes employees on the main job and secondary job whereas NA covers only main job and self-employed persons (not included in SES).
Lithuania	Figures in NA are higher than SES for some NACE sections due to different methodologies; black economy as well as gratuities and daily allowances are captures in NA but not in SES.
Luxembourg	Comparison with NA in Luxembourg is a bit difficult as in Luxembourg, NA still uses NACE Rev.1 whereas SES is classified in NACE Rev. 2.
Hungary	Negligible differences are due to different coverage between the two.
Malta	Variations between the two are due to micro enterprises (with less than 10 employees) which are covered in NA but not in SES. Employment seasonality is also deemed to be the cause of such differences between the two.
Netherlands	Comparison between the two is difficult because of conceptual differences between both sources. As a consequence, the number of employees in sections C to O was almost 4% higher in NA than SES.
Austria	The difference with NA is due to different statistical units, classifications, methodology and coverage.
Poland	No information available.
Portugal	The differences account for differences in definitions of variables and the scope of the two surveys; SES covers local units with enterprises employing 10 employees or more whereas NA covers total size class.
Romania	Differences between the two data sources are mainly due to different coverage between SES (enterprises with at least 10 employees) and NA (including small enterprises).
Slovenia	Beside the different sources between SES and NA, differences are due to other payments such as retirement bonus and jubilee rewards which are not part of the wage system in SES but included in NA.
Slovakia	No information has been documented.
Finland	The differences are explained by conceptual and methodological differences that exist between the two.
Sweden	Significant differences between the two sources are because SES includes only enterprises with 10 employees or more whereas NA includes also smaller firms.
United Kingdom	The current year of the ASHE is provisional, therefore ASHE 2011 microdata (from where SES 2010 is taken) was provisional at time of transmission. Nonetheless the number of late returns is so small that there is rarely a large difference in provisional and revised ASHE data.
Iceland	Data from National Accounts are not available.
Norway	Discrepancies can mostly be explained through differences in definitions and reference periods between the two sources.
Switzerland	NA does not break down information on D11 by economic sector and hence comparison for NACE Rev. 2 Sections B-S only is not possible.

Croatia	Comparability with National Accounts is not available.
Former Yugoslav Republic of Macedonia	SES and NA are compiled on different data sources and methodology. Whereas gross annual earnings in SES do not included payments in kind, these are taken into consideration in NA.
Turkey	Comparison could not be possible because National Accounts data by income approach is not available for the related period.

*Annex: SES 2010 overview of deliverables*

Eurostat, F3

Annex: SES 2010 overview of deliverables											
Country	Size coverage		NACE Rev. 2 sections covered		Sampling		Data collection		Coefficient of variation 'Gross monthly earnings' for whole population (%)	Coefficient of variation 'Gross hourly earnings' for whole population (%)	Response rate
	1+	10+	B to S	B to S (excl. O)	enterprise	local Unit	annual data	dedicated survey			
Belgium		√		√		√	√		0.280	0.280	82.00%
Bulgaria	√		√			√		√	0.200	0.190	88.40%
Czech Republic	√		√		√		√		0.007	0.007	83.80%
Denmark		√	√		√		√		Not applicable	Not applicable	100.00%
Germany		√	√			√	√	√	0.260	0.210	99.00%
Estonia	√		√		√			√	0.740*	0.420*	74.10%
Ireland		√	√		√		√		3.200	3.300	Not applicable
Greece	-	-	-	-	-	-	-	-	-	-	-
Spain	√		√			√		√	0.360	0.360	91.30%
France		√	√		√		√		0.003	0.003	83.40%
Italy		√		√		√		√	0.328	0.285	43.90%
Cyprus	√		√		√			√	1.200	1.200	88.15%
Latvia	√		√			√		√	1.200	1.020	89.40%
Lithuania	√		√		√	√		√	2.200	1.000	96.30%
Luxembourg		√		√		√		√	1.300	1.400	90.00%
Hungary	2+			√		√	√		0.880	0.897	99.90%
Malta	√			√	√			√	0.800	0.700	64.70%
Netherlands	√		√		√		√		Not applicable	Not applicable	Not applicable
Austria		√		√	√			√	0.290	0.260	98.30%
Poland	√		√			√	biennial		0.700	0.800	64.00%
Portugal		√	√			√	√	√	0.010	0.010	84.10%
Romania		√	√		√			√	0.017	0.019	85.89%
Slovenia	√		√		√	√		√	0.700	0.700	72.60%
Slovakia	√		√			√	quarterly		0.070*	0.010*	94.40%
Finland		√	√		√		√		0.090	0.110	83.00%
Sweden		√	√		√		√		0.400	0.400	82.00%
United Kingdom	√		√		employees' register		√		0.100	0.100	59.20%

<b>Iceland</b>		√	C-H, J, K, O-R	√		monthly		0.600	0.400	98.40%
<b>Norway</b>	√			√	√		√	0.010	0.010	97.00%
<b>Switzerland</b>	√		√		√	biennial		0.370	0.270	79.50%
<b>Croatia</b>		√	√		√		√	-	-	-
<b>FYROM</b>		√	√		√		√	0.470	0.470	74.86%
<b>Turkey</b>		√		√		√	√	0.390	1.500	90.10%
* full-time employees only										



**Annex: SES 2010 overview of deliverables**

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Bulgaria	√		√			√		√	0.200	0.190	88.40%
Czech Republic	√		√		√		√		0.007	0.007	83.80%
Denmark		√	√		√		√		Not applicable	Not applicable	100.00%
Germany		√	√			√	√	√	0.260	0.210	99.00%
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Ireland		√	√		√		√		3.200	3.300	Not applicable
Greece	-	-	-	-	-	-	-	-	-	-	-
Spain	√		√			√	√	√	0.360	0.360	91.30%
France		√	√		√		√		0.003	0.003	83.40%
Italy		√		√		√		√	0.328	0.285	43.90%
Cyprus	√		√		√			√	1.200	1.200	88.15%
Latvia	√		√			√		√	1.200	1.020	89.40%
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Luxembourg		√		√		√		√	1.300	1.400	90.00%
Hungary	2+			√		√	√		0.880	0.897	99.90%
Malta	√			√	√			√	0.800	0.700	64.70%
Netherlands	√		√		√		√		0.100	0.100	Not applicable
Austria		√		√	√			√	0.290	0.260	98.30%
Poland	√		√			√	biennial		0.700	0.800	64.00%
Portugal		√	√			√	√	√	0.010	0.010	84.10%
Romania		√	√		√			√	0.017	0.019	85.89%
Slovenia	√		√		√	√		√	0.700	0.700	72.60%
Slovakia	√		√			√	quarterly		0.070*	0.010*	94.40%
Finland		√	√		√		√		0.090	0.110	83.00%
Sweden		√	√		√		√		0.400	0.400	82.00%
United Kingdom	√		√		employees' register		√		0.100	0.100	59.20%
Iceland		√	C-H, J, K, O-R		√		monthly		0.600	0.400	98.40%
Norway	√			√	√	√		√	0.010	0.010	97.00%
Switzerland	√		√		√		biennial		0.370	0.270	79.50%
Croatia		√	√		√			√	1.440	3.790	88.92%
FYROM		√	√		√			√	0.470	0.470	74.86%
Turkey		√		√		√		√	0.390	1.500	90.10%

\* full-time employees only