

## **Eurostat/OECD 2018 questionnaire on the methodology underlying labour input data in national accounts**

Country: Slovenia

Date: March 2018

### ***Part I: Methods***

#### **1. Employment in persons**

**Question 1.1: Please describe the architecture of your estimation method for employment in persons. Please include details of differences in methods and data sources that may exist at different points in the time series (e.g. a break in the series) or due to the timing of the estimate (e.g. flash estimate, regular estimate or annual data). Please also provide links to articles that may be relevant.**

The main source for employees' estimate is the Statistical Register of Employment (SRDAP). The estimate for self-employed (employers and own-account workers) is mainly based on tax declarations on income from production activities. In addition to SRDAP and tax declarations, estimates are made for the following categories of employees and self-employed:

- non-financial corporations without employees;
- students' work;
- data on employees working on Slovene ships;
- persons performing special type of contract work;
- individual farmers, loggers, family members workers and other work on farm;
- N1 deliberately non registering activities (alternative healers, teaching lessons and domestic services);
- N2 illegal activities (drugs, prostitution).

**Question 1.2: What is the main original source for employment in the national accounts (e.g. administrative source, labour force survey, business survey, other)? Briefly describe this source, its coverage (including over time, range of businesses/households covered, etc.), its availability and whether it is in terms of jobs and/or persons.**

The main source for employees' estimate is the Statistical Register of Employment (SRDAP). SRDAP is regularly monthly updated by forms for health and pension insurance (data are provided by the Health Insurance Institute, the Pension and Disability Insurance Institute and the Employment Service of Slovenia) and different databases (the Central Population Register and the Business Register). It includes persons who pay social contributions to obligatory pension and health insurance system and are employed (employees and self-employed) on the territory of the Republic of Slovenia (domestic concept). They can be employed permanently or temporarily, full time or part time. It also includes persons temporary out of work due to sickness or any other reason, if social contributions for them are paid. Data from SRDAP are available 40 days after the end of the quarter and they are in terms of persons.

For self-employed estimate, the main data source are tax declarations on income from productive activities of households. They are collected by the Tax Administration for administrative purpose and submitted to the Statistical Office in individual form (unit level) approximately 6 months after the end of the year. The data refer to the calendar year. Tax declarations on income from productive activities of households are submitted to the Tax Authority by private persons performing productive activities and which are recorded

in relevant register (tax register of individual private entrepreneurs, register of private researchers, register of barristers, register of sportsmen etc.). Included are also private persons performing agricultural activities.

**Please specify the sources used for different parts of employment (in particular if sources differ between employees and self-employed, and/or between industries, firms of different size, etc.). If sources differ, please provide a clear distinction when answering the questions that follow.**

**Labour force survey** is the main data source for the estimate for farmers and unpaid family workers. Benchmark estimate for farmers is extrapolated to the current year using data from The Health Insurance Institute of Slovenia (farmers as medical care users) and Pension and Disability Insurance Institute (farmers' pensions).

**Annual accounting statements** are used for estimation number of employees on our ships and for employment in non-financial corporations without employees.

**Question 1.3: Please describe how estimates of annual figures based on higher frequency data (e.g. weekly, monthly, quarterly) are derived. Please also specify, if relevant, how annual figures are derived if survey information is less periodic (e.g. every 5 years)?**

Data from SRDAP refer to employment at the end of month. Quarterly number is obtained as the average of four figures; beginning of the quarter, end of first month, end of second month and end of the quarter. Annual figure is calculated as the average of four quarters.

**Question 1.4: Please describe the adjustments made to pass from jobs to the concept of persons (if the original source is in terms of jobs).**

No data on jobs are available.

**Question 1.5: Please describe the adjustments made to correct for coverage of the economic territory (see ESA §11.17-11.19)? This refers specifically to residents working for non-resident units abroad non-residents working in resident units. If relevant, please also describe adjustments for military (including conscripts, where applicable) and other collective households not covered by your main source.**

Since data sources used are on domestic concept, no adjustments for national / domestic concept are necessary.

To SRDAP data we add the following adjustments to arrive at the NA estimate:

- Farmers, loggers and unpaid family workers in agriculture are estimated according to the Labour Force Survey (LFS) Unpaid family workers are entirely added to A Agriculture, hunting and forestry and are not estimated for other activities since they are not significant in those;
- Self-employed persons are estimated based mainly on tax declarations on income from production activities and annual accounting statements data;
- Non-financial corporations without employees: these corporations have annual accounting statements (so they are active corporations), but according to the SRDAP have no employees. Since they contribute to gross value added, they are also included to the employees' estimate;
- Students' work: the estimation of students' employment is based on estimation of gross payments to students by temporary employing agencies and per-capita compensation of employees in activity N. The estimate for students' work is included in the activity of the employment agencies (N Administrative and support service activities);

- Persons performing occasional contract work (employees) and persons on honoraria payments (self-employed) are estimated on gross value for these types of payments divided by per-capita compensation of employees and net mixed income per self-employed in NACE activity M;
- Illegal activities (N2): estimates for illegal trafficking of drugs and prostitution are based on Ministry of the Interior data, NIJZ and other data sources;
- Deliberately non-registering activities (N1): estimates for the number of alternative healers (on the basis of the number of alternative medicine doctors (healers) who are not included in common data sources), domestic services such as baby-sitting and assistance to elderly people (on the basis of the population of elderly people and children who need help) and teaching lessons (as a ratio between turnover and an average wage);
- Employees working on Slovene ships are not included in the SRDAP, therefore they are estimated on the basis of gross value added estimation and added to activity H Transportation and storage;
- Casual work on farm is estimated according to census and agriculture statistics data;
- Clerics are reclassified from self-employees (as shown in the SRDAP) to employees in activity S Other service activities.

**Question 1.6: Which adjustments are made for the unobserved economy (e.g. producers that deliberately do not register, individuals providing their labour that are not required to register, illegal workers, etc.)?**

Please see description under 1.5.

**Question 1.7: Which, if any, other adjustments are made (e.g. inclusion of resident workers below the age threshold, prisoners, adjustments made to account for statistical deficiencies in the source data, etc.)?**

No other adjustment is done.

**Question 1.8: In cases where Labour Force Survey data have not been used as the main source (even if only for some activities or groups of workers), please explain why. Are LFS data used for adjustments or cross-checking? Are differences monitored?**

SRDAP is register from where data at the exact point of time can be extracted. It shows data according to actual activity where persons are employed which is consistent with other NA estimates. In register data we have full coverage, while LFS results are estimates based on the statistical sample. In LFS persons have to declare the activity of work, which can be different from the activity in the administrative sources. Data from LFS were with NA estimate cross-checked for year 2000.

A comparison between LFS and national accounts data is not made. As mentioned above, comparison of the LFS and the SRDAP which are both complete data sources would not lead to any improvement.

## **2. Hours worked**

**Question 2.1: Please describe the architecture of your estimation method for hours worked. Please include details of differences in methods and data sources that may exist at different points in the time series (e.g. a break in the series). Please also provide links to articles that may be relevant.**

Main source is the survey Hours worked and Labour Force Survey data on average hours worked per person. In combination with these two sources also national accounts data on employment in number of persons are used.

Data on average hours worked are multiplied by number of persons to obtain total figure for hours worked in national accounts. National accounts data on employment in number of persons already include all necessary adjustments to adapt to national accounts methodology.

Data from the survey Hours worked does not include data on self-employed persons, therefore labour Force Survey data are also used in the calculation.

Data on hours worked are compiled quarterly and annual figure is the sum of quarters.

**Question 2.2: What is the main original source for hours worked in the national accounts (e.g. administrative source, Labour Force Survey, Business survey)? Briefly describe this source, its coverage and its ability to reflect the definition of hours worked (see ESA §11.27-11.31). In particular, does it capture a ‘usual’ hours, ‘actual’ hours, or some other concept?**

Main source for estimate is Hours worked survey in combination with employment data in number of persons by national accounts. Hours worked survey captures actual hours worked and is based on a secondary data analysis. Data are obtained exclusively from the existing (available) statistical and administrative data sources. Data sources used to obtain data of the survey include:

- Other statistical surveys;
  - Monthly report on Earnings by Legal Persons
  - Average Monthly Earnings by Registered Natural Persons
  - Labour Force Survey
  - Working Time Structure Survey
- Statistical Register of Employment (SRDAP);
- Administrative record: Temporary/Permanent Absence from Work due to Illness, Injury, Care, Escort and Other Reasons (IVZ 3); data are transmitted to SURS by NIJZ;
- calendar (data on the number of public holidays and non-working days).

The survey covers all persons in paid employment with signed contracts of permanent or fixed-term employment for full- or part-time job, which are employed by legal persons in the private/public sector (including their units) or by registered natural persons, both registered for performing their activity on the territory of the Republic of Slovenia.

The survey does not cover self-employed persons, farmers, persons in paid employment who did not receive any of the earnings' types (i.e. wage or non-refunded wage compensation) paid by the employer in the observed period, employed persons engaged in community work schemes, persons in paid employment under work contract, contract for a copyrighted work and similar contracts (i.e. pupils and students on practice, labour force hired through temporary work agencies, etc.), posted workers and persons in paid employment who were absent from work due to sick leave over 30 working days, maternity, paternity or parental leave in case they did not receive earnings from the employer's resources.

Number of hours worked is the total number of hours actually worked in the observed quarter by persons in paid employment during ordinary working time (normal working hours), hours worked in addition to those (paid and unpaid overtime), paid hours for time spent at the place of work on tasks such as preparing the site and time of short rest periods at the work place. The concept of hours worked excludes hours worked in community work schemes, time used for commuting between home and work, reimbursed hours

(e.g. for maternity, paternity or parental leave, sick leave over 30 working days and reimbursed hours of trainees and of disabled), time spent for meal breaks and hours not worked with non-refunded wage compensation paid by the employer, which consist of the following absences from work: annual, special and training leave, public holidays and other non-working days, determined by the legislation, sick leave up to 30 working days and other paid hours not worked.

Data from the survey are available quarterly and annually.

**Please specify the sources used for different parts of the employed population (in particular if sources differ between employees and self-employed, and/or between industries, firms of different size, etc.). If sources differ, please provide a clear distinction when answering the questions that follow.**

**Labour Force Survey** is the data source used for the estimation of self-employed persons (in combination with Hours worked survey). It is also data source for the estimate for farmers, loggers and unpaid family workers.

**Question 2.3: Please describe the adjustments made to transform the original source to adapt it to the concept of working hours as defined in national accounts? Please, describe each adjustment separately. These adjustments might include:**

- Accounting for holidays and annual leave
- Accounting for sickness leave
- Accounting for strikes and temporary lay-offs
- Accounting for paid but unreported overtime
- Accounting for unpaid overtime

The data in original source are already adapted to the concept of working hours in national accounts so no further adjustments are necessary. The method of compilation includes all above mentioned adjustments and is described in [Methodological explanations](#) of the survey.

Data on the number of **paid overtime hours** (PL\_NADUR) are acquired from the statistical survey Obrazec 1–ZAP/M for persons employed by legal persons, while for persons employed by registered natural persons these data are estimated from data available in the statistical surveys ZAP-SDČ (data on the ratio between the share of paid overtime hours in paid hours for persons employed by registered natural persons and the share of paid overtime hours in paid hours for persons employed by legal persons) and Obrazec 1–ZAP/M (data on the share of paid overtime hours in paid hours for persons employed by legal persons) and from the estimated component paid hours (PL\_UR) for persons employed by registered natural persons.

Data sources for estimating **unpaid overtime hours** (NEPL\_NADUR) are statistical survey ANP (data on the ratio between the number of unpaid overtime hours and the number of paid overtime hours) and estimated component paid overtime hours (PL\_NADUR).

For estimating **annual leave hours** (D\_UR) information from statistical surveys ZAP-SDČ (data on the average annual number of used annual leave hours per person in paid employment), ANP (data on the distribution of used annual leave hours by quarters) and Obrazec 1–ZAP/M (data on the number of persons

employed by legal persons who received earnings) or ZAP-RFO-D/M (data on the number of persons employed by registered natural persons who received earnings) are used.

The basic data source for estimating **sick leave** hours up to 30 days chargeable to the employer (B\_UR) is administrative record IVZ 3 (data on the number of sick leave hours chargeable to the employer). Also, available information from SRDAP (registry data on the number of persons in paid employment) and statistical survey Obrazec 1–ZAP/M (data on the number of persons employed by legal persons who received earnings) or ZAP-RFO-D/M (data on the number of persons employed by registered natural persons who received earnings) is also used for estimating this component.

For estimating **public holidays hours** (P\_UR) information from the calendar (data on the number of public holidays and non-working days), SRDAP (registry data on the number of persons in paid employment for full-time job, the number of persons in paid employment for part-time job and the ordinary number of weekly hours of employment of individual person in paid employment) and statistical survey Obrazec 1–ZAP/M (data on the number of persons employed by legal persons who received earnings) or ZAP-RFO-D/M (data on the number of persons employed by registered natural persons who received earnings) are used.

Data sources for estimating **meal breaks hours** (M\_UR) are SRDAP (registry data on the ordinary number of weekly hours of employment of individual person in paid employment) and results of the estimated working hours' components PL\_UR, PL\_NADUR, P\_UR, D\_UR and B\_UR.

**Question 2.4: Is a specific adjustment made to account for under- or over-reporting in the source data? Please specify if these adjustments are made for employees and/or self-employed workers.**

No specific adjustment is made to account for under or over-reporting in the source data.

**Question 2.5: If an adjustment is made for the number of persons employed in relation to the unobserved economy, what assumption is made regarding the hours worked by these persons?**

No further adjustment is made in relation to the unobserved economy, since it is already estimated within employment in persons. It is assumed that average hours worked by persons in unobserved economy is the same as in corresponding activities of observed economy.

**Question 2.6: Which other adjustments, if any, are made?**

Adjustment is made for the difference between average hours worked by self-employed persons and persons in paid employment. Adjustments are also made for average hours worked by farmers, loggers and unpaid family workers (by LFS).

**Question 2.7: If necessary, please describe any additional calculations needed to derive total hours worked and average hours worked from the sources and adjustments specified above. This includes, but is not limited to, adjustments made to align the coverage of hours worked with that of employment in persons (i.e. the coverage produced by the process followed in section 1).**

Additional calculation is needed to estimate average hours worked by self-employed persons. To estimate them average hours worked for employees (by survey Hours worked) are multiplied by the ratio between self-employed persons and persons in paid employment (by LFS).

For farmers, loggers and unpaid family workers average hours worked by LFS are used. Total number of hours worked is calculated by multiplying average hours with number of persons for these categories in national accounts.

## *Part II: Other work in this area*

### **3. Differences between national accounts and Labour Force Survey estimates**

**Question 3.1:** To what extent do you consider your Labour Force Survey an accurate tool for the measurement of employment and hours worked? Please describe any issues or shortcomings of which you may be aware.

Please see description under 1.8

**Question 3.2:** If the Labour Force Survey is not the primary source of data used to derive your estimates of employment in persons hours worked: Are you able to quantify, even approximately, what the difference would be between your current national accounts estimates and those you would obtain if you did use the Labour Force Survey data as your primary source?

If LFS data were used as primary source the estimates for average hours worked would be 8-15% higher.

**Question 3.2.1:** Where differences between these estimates exist, can you provide a brief assessment of the source of these differences?

Please see description under 1.8

### **4. Flash estimates of employment in persons**

**Question 4.1:** Are you currently producing flash estimates of employment (t+30 or t+45)? If so, please describe briefly the methodology, coverage and sources. If you are not producing a flash estimate, do you have plans to start doing so in the future?

We currently produce flash estimates of employment at t+45. The methodology, coverage and sources are the same as for regular estimates.

**Question 4.2:** Please provide information on the quality of the estimates (e.g. revision analysis).

Since our main source (SRDAP) is available sooner we are able to produce employment data at t+45 with the same quality as t+60.

### **5. Other data produced (Optional)**

**Question 5.1:** Do you have plans in the near future to improve or expand the content of national accounts labour input data (e.g. improved alignment with national accounts concepts, extension of the time series, increased industry detail, etc.)?

We plan to align employment activities with Statistical business register.

**Question 5.2:** Do you produce labour input data other than that already discussed, for example quality adjusted labour input or labour input in terms of full-time equivalents? If so, please provide details and/or links to these data.

No other labour input data is being produced.

***Question 5.3:*** Do you produce productivity statistics (e.g. labour productivity for the total economy, further breakdowns of labour productivity, capital productivity, multi-factor productivity, etc.)? If so, please provide details and/or links with regards to these data.

Productivity statistics data are currently not produced.

***Question 5.4:*** If there is any other work that you produce currently, or are looking to produce in the future, in the areas of labour input or productivity, please use the space below to inform us about this work.