

Joint OECD / Eurostat questionnaire on national accounts employment and hours worked

THE NETHERLANDS

I. Employment¹

Question 1.0: Describe succinctly the architecture of your estimation method for employment in persons.

Statistics Netherlands produces labour accounts, which is a statistical system of core variables on labour acquired through integration, hence providing overall coverage and internal consistency. These labour accounts provide statistics on jobs, FTE's, contractual hours, hours paid, hours actually worked, wages and wage costs, incorporated within the national accounts. The accounts are broken down to 10 or 49 ISIC groups, job size (full-time, part-time), labour relation (fixed, flexible) and dependency (self-employed or family worker, employee). Estimates are made both annually and quarterly.

Labour accounts use different sources:

- a) Household surveys: LFS
- b) Establishment surveys: annual survey on employment and wages, quarter survey on employment and wages, labour cost survey, quarterly labour cost statistics, surveys for specific branches of industry.
- c) Administrative registers: Social security and tax registers.
- d) The Social Statistical Database. A complete database on persons in the Netherlands, based upon administrative registers and the annual survey on employment and wages. (This database is used by labour accounts since the revision in 2005 and is used for final annual estimates from 2001 onwards.)

(a full list of sources is found in "labour accounts in theory and practice", section 2.2.1.)

The integration process is made in four stages:

1. Harmonisation of concepts and classifications
2. Achievement of full coverage (completion): discrepancies between the type and size of the sources' populations are detected and complemented using available data from other sources or explicit assumptions.
3. Minimisation of measurement errors (e.g. by means of controls with accounting relations between jobs, persons, FTE, paid and unpaid hours, etc)
4. Balancing (i.e. only the residual small differences)

The adjustments are partly being made in micro data, partly meso-totals and averages are being adjusted. All the adjustments are documented.

¹ Main sources used to pre-fill this questionnaire are:

- Report TF ESA95 employment, CBS 2000.
- Labour accounts in theory and practice: the Dutch experience. Publication from CBS, 1999
- "The development of productivity statistics at Statistics Netherlands". De Haan, Balk, van den Bergen, de Heij, Langenberg and Zijlmans. Paper for the OECD workshop on productivity measurement, Madrid 17-19 October 2005

Sources and procedures for employees and self-employed differ, but the distinction between them is not always that clear that they can be compiled independently.

Compilation process for employees:

The process starts with the comparison of the two primary sources on employment, one from establishment surveys and the other LFS. Then both datasets are conformed and the largest differences are analysed and corrected. This part of the procedure in principle leads to linking tables of LFS and establishment surveys and the adjustments needed to reconcile them.

Afterwards, jobs, hours and earnings are combined in labour accounts. This is done linking establishment survey data at a very detailed level. The main identity relations are also checked; in the case of the employees they are:

- (a) Number of employed persons = number of main jobs
- (b) Number of main jobs + number of secondary jobs = total number of jobs
- (c) Number of jobs x annual earnings per job = sum of earnings
- (d) Contractual hours + overtime hours = paid hours
- (e) Annual paid hours per job x hourly regular earnings = annual regular earnings per job
- (f) Number of jobs x annual bonuses and allowances per job = sum of bonuses and allowances
- (g) Regular earnings + bonuses and allowances = total earnings.

Afterwards, the internal labour accounts discrepancies are solved. The definitional equations can be seen as the central element in the process of statistical integration. These identities reveal both conflicting data and gaps.

Finally, the processing concepts are transformed into publication concepts: full-time equivalents, hours actually worked and compensation of employees (more on hours worked in question 2.0).

Compilation process for self-employed:

For self-employed data there are no two different high quality sources. The main source is LFS. Nevertheless, for some specific industries a confrontation between LFS and data from production statistics are used to improve quality. In those cases, it was done with job data.

Another problem of employment data on self-employed in labour accounts is the lack of link between labour input and payment for labour.

Question 1.1: 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, its availability and whether it is in terms of jobs or persons.

If necessary, please specify sources for different parts of employment (in particular if sources differ between employees and self-employed, and/or between economic

branches). In this case, please provide answers to the following questions for each of these sources where necessary.

See above.

Question 1.2: Which calculations are made to pass from persons employed at a specific point-in-time (or several points) to annual averages?

Quarterly surveys have a reference period, e.g. LFS has a reference week. Annual estimates are average of quarterly estimates.

Question 1.3: Which adjustments are made to pass from jobs to the concept of persons (if the original source is in terms of jobs), or vice versa?

The integration process depicted in the reply to question 1.0 is done for jobs, not for persons. Once the annual jobs figures have been determined, the link between jobs and persons employed from the LFS is used for the determination of the annual labour accounts data on persons employed. The determination of quarterly data on persons employed differs between employees and self-employed.

- For employees, the ratio jobs/employed persons and data on frontier workers are only available on annual basis. The following assumptions are made: annual ratios jobs/persons determine the trend in the quarterly ratios, and no differences occur in the number of frontier workers from quarter to quarter.
- For self-employed persons, neither quarterly source data on jobs nor on employed persons are available. For the calculation of self-employed jobs, the trend effects are calculated from annual data and the seasonal effects are neglected unless evidence from other statistics shows the contrary. In this case, fragmented information from LFS and economic statistics is used. Afterwards the ratio jobs/employed persons are applied to obtain self-employed persons.

Question 1.4: Which adjustments are made in terms of coverage (See ESA § 11.17 to 11.19 for details)? This means specifically the exclusion of residents working for non resident producer units and the inclusion of non-residents working with resident producer units. If necessary, also specify adjustments for military (including specifically conscripted forces) and other collective households not covered by the main source.

Question 1.5: Which exhaustiveness adjustments are made (i.e. adjustments to take into account the unobserved economy)?

The number of persons employed remains unchanged. It is assumed that some employees do some work 'on the site'. Information on the amount of payment involved (obtained through the National accounts) is imposed on their wages. This is done on the meso-level.

Question 1.6: Which, if any, other adjustments are made (e.g. inclusion of resident workers below the age threshold considered in source statistics, prisoners at work See ESA § 11.13 to 11.16 and § 11.17 to 11.19 for details)?

Question 1.7: In cases where for some part of employment, Labour Force Survey data has neither been used as the main source nor for major adjustments, please explain why? Are LFS data used for cross-checking? Are differences monitored?

Generally speaking the LFS coverage is poor in relation to other sources. The LFS covers about 0.5 % of the labour force. The annual survey on employment and wages covers 50 % of all *employees*. (A selective group though.) The social statistical database covers all persons (legally) living in the Netherlands. This does not mean that the LFS is not used by labour accounts. It contains information the other sources do not have (of not quick enough), e.g. on self-employed, on employed on the educational level and so on. (This year a project will start to implement the educational level.)

II. Actual hours worked

Question 2.0: Describe succinctly the architecture of your estimation method for hours worked.

The core of the labour accounts system contains data on contractual hours, hours overtime and hours paid. To estimate hours actually worked different methods are used for employees and self-employed:

1. **For employees:** the so-called 'component' method is used. This means that the number of contractual hours is taken as a starting point. This number is translated into the number of hours actually worked by adding or subtracting various time components. Added time components are paid and unpaid overtime. Subtracted components are sick leave, pregnancy and maternity leave, short leave, bad weather leave and short-time. For data on the number of contractual hours (the larger part) and paid overtime of employees, the System of Labour Accounts is used as the main source. The other time components are derived from various other sources. Data on days lost because of strikes and on bad weather leave become available from specific registrations. Sickness and pregnancy leave is recorded quarterly in an establishment survey which approaches personnel departments. Data on maternity leave is used from the labour force survey and estimations for short leave are based on information from the labour cost survey. Some of these data are only available on annual basis and additional assumptions are needed to construct hours actually worked on a quarterly basis.

(Unpaid overtime now *is* included in hours actually worked.)

2. **For self-employed:** the hours actually worked per self-employed are taken directly from the Labour Force Survey. The number of self-employed (per NACE group) is taken from within the labour accounts system. Furthermore, legal information is used as well to distinguish between self-employed working more or less than 24 hours a week. (This has taxation implications.)

Question 2.1: What is the main original source for hours worked in the national accounts (e.g. administrative source such as official working hours, Labour Force Survey, other)? Briefly describe this source, its coverage and its ability to reflect the ILO definition of hours worked (see paragraphs 17.11 of the SNA).

See above.

If necessary, please specify sources for different parts of the employed population (in particular if sources differ between employees and self-employed, and/or between economic branches). In this case, please provide answers to the following questions for each of these sources.

The main source for final annual estimates is the social statistical database. For preliminary years it is the annual survey on employment and wages.

If you do not compile national accounts employment data in terms of hours worked for the total economy, please indicate when you intend to do so.

Question 2.2: Which adjustments are made to transform the original source to adapt it to the concept of working hours as defined in the national accounts? Please specify adjustments:

**to take into account holidays and annual leaves,
for sickness leaves,
for strikes and temporary lay-offs,
for paid but unreported overtime,
for unpaid overtime.**

See above

Question 2.3: Is a specific adjustment made for unreported overtime of self-employed? On the contrary, if LFS data is used, do you introduce a downward adjustment to reported actual hours by self-employed?

See above

Question 2.4: What assumption is made regarding the hours worked by persons included in the context of exhaustiveness adjustments?

See above.

Question 2.5: Which, if any, other adjustments are made

See above.

Question 2.6: If necessary, describe any additional calculations needed to derive total hours worked and average hours worked from the sources and adjustments specified above.

Not relevant.

Annex: bridge table between LFS and national accounts

This is a standard annex that may or may not fit with the sources and methods used in your country. The annex aims to reconcile the results of LFS with national accounts, both for estimates of persons (annual and quarterly) and annual hours worked. This information is most valuable to quantify the adjustments explained in sections I and II of the questionnaire.

If you use LFS for the national accounts employment estimates, please quantify the adjustments in place for the periods indicated below (the figures included here are the latest estimates available at Eurostat). Complete at least one column for one of the periods; the information for several columns is welcome.

If you do not use LFS for these employment estimates, but you use it for control or verification, please give your interpretation of the figures.

Note on the relationship between the LFS and the labour accounts.

After the National accounts revision (2005), the final annual estimates from 2001 onwards are based upon the social statistical database. The LFS estimates for persons employed (the working labour force) are adjusted after confrontation with the above mentioned estimates. The remaining differences are caused solely by differences in definition between the National accounts and the LFS (such as national versus domestic concept etc.) The hours actually worked according to the LFS is obtained through direct measurement. Labour accounts estimates on hours actually worked of employees are obtained from the component method. For self-employed labour accounts does use LFS data, but they are adapted.

Persons employed (annual data)

	2001	2002	2003	2004
LFS ²	8,069	8,168	8,121	8,106
(Insert here rows for your adjustments)				
...				
National accounts (domestic concept)	8,282	8,324	8,274	8,157

Persons employed (quarterly data)

	2004Q1	2004Q2	2004Q3	2004Q4
LFS	8,059	8,101	8,150	8,113
(Insert here rows for your adjustments)				
...				

² The annual LFS results indicated here are actually the average of the quarters in the year.

National accounts (domestic concept)	8,107	8,189	8,207	8,124
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Annual hours worked

	2001	2002	2003	2004
LFS	12,378,303	11,738,554	11,681,133	11,608,485
(Insert here rows for your adjustments)				
...				
National accounts (domestic concept)	11,791,000	11,723,000	11,653,000	11,476,000