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REGISTERS AS A SOURCE OF LABOUR MARKET DATA IN THE NORWEGIAN
NATIONAL ACCOUNTS¹

Submitted by Statistics Norway

The meeting is organised jointly with Eurostat and the Organization for Economic
Co-operation and Development

INTRODUCTION

1. Employment has traditionally constituted an integrated part of the Norwegian national accounts. The first comprehensive national accounts (NA) were published in 1952, including employment figures back to 1930. In the last part of the 1980s, Statistics Norway introduced new methods for estimating employment figures in NA, inspired by approaches to labour accounting systems in the Netherlands and other countries. Total hours worked were estimated for the first time in the Norwegian NA.

2. Today, consistent employment figures from the national accounts are available for the period 1970 and onwards. Since 1997, quarterly figures on employed persons by industry have

¹ This paper has been prepared by Ann Lisbet Brathaug and Tor Skoglund at the invitation of the secretariat.

also been estimated and integrated in the Norwegian quarterly national accounts. Quarterly estimates on total hours worked are published from 1999.

3. Statistics Norway is now conducting a new main revision of the labour accounts by introducing jobs in the system, and by using new statistical sources more efficiently. Revised employment figures from the national accounts will be published in December this year.

MAIN SOURCES AND ESTIMATION APPROACH

4. The Norwegian national accounts contain three basic employment concepts: employed persons, full-time equivalent persons and total hours worked. The main sources of the estimations are:

- Labour Force Surveys (LFS)
- Register-based employment statistics
- Central statistics on sickness absence
- Enterprise/establishment surveys (structural statistics)
- Central and local government accounts
- Survey-based wage statistics

5. The estimations are conducted at the most detailed industry level of the national accounts, which means about 190 industries. The main objective is to obtain consistency between employment figures, wages and salaries and compensation of employees. Information from enterprise/establishment surveys and government accounts (which contain information on compensation of employees and total wages and salaries) and wage statistics (which contain information on wages and salaries per full-time equivalent person) play an important role in the estimation of employment figures for the majority of industries. The reason for this approach is that data on compensation of employees and wages and salaries are assumed to be more consistent with production data and more accurate than data from the LFS and the register-based employment statistics in the Norwegian statistical system.

6. For agriculture, fishing and some service industries there are no enterprise surveys, and the number of employees is estimated directly from the LFS or the register-based employment statistics.

7. For all industries data from the LFS, the register-based employment statistics and the central statistics on absence through illness are used to estimate working hours, part-time employment, secondary jobs, gender coefficients, etc. Total hours worked is estimated by using information on working hours in each industry, and by adding overtime hours and subtracting hours of absence from work.

8. In addition to the register-based employment statistics, the central statistics on absence through illness rest heavily on register information.

THE CENTRAL STATISTICS ON ABSENCE THROUGH SICKNESS

9. Statistics Norway collects data on number of persons on sick leave and days of absence through illness from a central Sick Leave Register administrated by the National Insurance

Administration. This register covers all absence through illness certified by doctors, i.e. sick leave of more than three days. Information from this register is supplemented by an establishment-based survey that covers self-certified absence through illness (1-3 days of absence). Statistics Norway then publishes absence through illness rates, estimated as total man-days of absence through illness as a percentage of total scheduled man-days (possible working days) by industry and gender. Total scheduled man-days are estimated from the register-based employment statistics.

10. There is great interest on the part of employers' and employees' organizations and the authorities in monitoring the development of absence through illness in Norway, and the quality of the statistics on absence through illness is assumed to be good. Quarterly and annual information from this statistics is used in the estimation of total hours worked by industry in the national accounts. This is a successful example of compiling data that is important in national accounts by supplementing information from an administrative register by surveys and other types of sources.

11. The table below shows that a steady growth in absence through illness rates in the years 2001-2003 was followed by a major decline in 2004. This contributed to an increase in the total hours worked from 2003 to 2004 in the national accounts.

Sickness absence rates for employees. Percentages

2000	2001	2002	2003	2004
7,1	7,4	7,8	8,2	7,1

THE REGISTER-BASED EMPLOYMENT STATISTICS

12. The National Insurance Administration is responsible for maintaining a central register on employees. Statistics Norway has produced statistics from this register since the 1980s. In recent years, the coverage has been extended considerably by supplementing the basic register information with information from other administrative sources:

- The Central Register of Establishments and Enterprises.
- The End of the Year Certificate Register (EYC-register). All enterprises are obliged to submit a completed EYC for all employees to the Tax Directorate each year.
- The register of conscripts.
- The register of Personal Tax Payers (covering self-employed).

13. These registers are linked and the data are revised through a comprehensive system of consistency checks. With a broader set of administrative data, it has been possible to implement the definition of employment used in the Labour Force Surveys. This means that all persons of 16-74 years of age who have conducted work for more than one hour in the reference week, or who were temporarily absent from work, are included. The LFS play an active role in the production process, and the total number of employed persons in the register-based employment statistics is adjusted to the total number of employees and self-employed in the LFS for the same quarter. The industry figures are, however, not consistent. The statistics cover the 4th quarter in each year and are published in June the next year. Combining information from different sources leads to more correct classification of each person's labour market status. Persons with more than one job are classified according to their main job.

14. Statistics Norway is facing some problems when using the register-based employment statistics in the national accounts.

- Estimates from the 4th quarter are not always equivalent to averages for the whole year. This may be a problem for industries which are experiencing seasonable changes or industries with major structural changes (either growth or decline).
- There are problems concerning correct estimation of employment by persons who work only occasionally, particularly in wholesale and retail trade and hotels and restaurants. This is the main reason for inconsistent industry figures in the register-based employment statistics and the LFS.
- The number of employees in the register-based employment statistics is not necessarily consistent with information derived from statistics on compensation of employees and wages and salaries.
- Non-resident employees in resident producer units are not covered by the register-based employment statistics.
- Several changes and improvements in the register-based employment statistics have reduced the comparability over time.

15. As pointed out above, statistics on wages and salaries play an important role in the estimation of employment for many industries in the Norwegian national accounts. Nevertheless, register-based employment statistics are used in assessing the estimation results for these industries. Major inconsistency between the sources leads to more thorough investigation of the industries concerned.

16. The table below shows the total discrepancy between employment figures in the national accounts and in the register-based employment statistics. Non-resident employees, mainly foreigners employed in ocean transport, are estimated in the national accounts by using information from the Norwegian Shipowners' Association. The ongoing revision of the labour accounts will produce new and higher estimates on non-resident employees.

Employed persons estimated in the national accounts and in the register-based employment statistics. 4th quarter. 1000

	2002	2003	2004
National accounts	2296	2280	2295
Register-based employment statistics*	2267	2260	2274
Difference	29	20	21
Non-residents estimated in the national accounts	25	25	24
Statistical discrepancy	4	-5	-3

* Consistent with the number of employees and self-employed in the LFS.

REFERENCES

Skoglund, T.: Employment in the Norwegian National Accounts. Documents 2001/9, Statistics Norway.

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