



*Tore Halvorsen*

# Documents

**Cross border flows of  
compensation of employees in  
the Norwegian National Accounts  
and Balance of Payments**

# Contents

<b>1. INTRODUCTION</b> .....	<b>3</b>
<b>2. SUMMARY AND CONCLUSIONS</b> .....	<b>4</b>
2.1 SUMMARY .....	4
2.2 ORGANISATION OF THE REPORT .....	5
<b>3. BACKGROUND AND OBJECTIVES</b> .....	<b>6</b>
3.1 GENERAL BACKGROUND .....	6
3.2 CURRENT SOURCES AND RESULTS .....	7
3.3 OBJECTIVES .....	8
<b>4. NATIONAL ACCOUNTS FRAMEWORK - REST OF THE WORLD ACCOUNT</b> .....	<b>9</b>
4.1 FUNDAMENTAL CONCEPTS .....	9
4.2 COMPENSATION OF EMPLOYEES .....	10
<b>5. THE REST OF THE WORLD ACCOUNT AND COMPENSATION OF EMPLOYEES</b> .....	<b>12</b>
5.1 CROSS BORDER WORKERS - COMPENSATION OF NON-RESIDENT EMPLOYEES .....	12
5.2 EMPLOYERS' SOCIAL CONTRIBUTIONS .....	15
5.3 SPECIAL FEATURES .....	16
5.3.1 <i>Non-resident sailors</i> .....	16
5.3.2 <i>SAS-pilots and other SAS-crewmembers</i> .....	17
<b>6. COMPENSATION OF EMPLOYEES TO ABROAD - SOURCES AND DIRECT ESTIMATIONS</b> .....	<b>18</b>
6.1 RESIDENT EMPLOYERS.....	18
6.1.1 <i>The enterprise sector - the Central Register of Establishments and Enterprises (CEE)</i> .....	18
6.1.2 <i>Other types of resident employers</i> .....	19
6.2 NON-RESIDENT EMPLOYEES .....	20
6.2.1 <i>Labour force statistics</i> .....	20
6.2.2 <i>Tax Return Statistics (register) (TRS)</i> .....	22
6.2.3 <i>Link between Central Register of Wages and Salaries and Tax Return Register</i> .....	22
6.3 SUMMARY: NON-RESIDENT EMPLOYEES IN NORWAY – COMPENSATION OF EMPLOYEES TO ABROAD .....	23
<b>7. COMPENSATION OF EMPLOYEE TO ABROAD: ESTIMATION BASED ON LABOUR FORCE STATISTICS</b> .....	<b>24</b>
<b>8. FINAL ASSESSMENT AND RESULTS</b> .....	<b>27</b>
8.1 COMPENSATION OF EMPLOYEES TO ABROAD .....	27
8.2 COMPENSATION OF EMPLOYEES FROM ABROAD - NORWEGIAN RESIDENT EMPLOYEES AND NON-RESIDENT EMPLOYERS .....	29
8.3 GROSS NATIONAL INCOME .....	31
8.4 GEOGRAPHICAL BREAKDOWN .....	32
8.5 FUTURE CURRENT ESTIMATIONS .....	34
ANNEX 1. FLOW CHART. ESTIMATION OF COMPENSATION OF NON-RESIDENT EMPLOYEES. ....	35
ANNEX 2. ABBREVIATIONS (THE ABBREVIATION IN NORWEGIAN IS GIVEN IN BRACKETS).....	36
ANNEX 3. REFERENCES .....	37
ANNEX 4. CONTRIBUTORS AND MAN-HOURS CONSUMED.....	38
<b>RECENT PUBLICATIONS IN THE SERIES DOCUMENTS</b> .....	<b>39</b>



## 1. Introduction

This report is a documentation of a project financed jointly by Eurostat and Statistics Norway, and aiming at high quality estimates for flows of compensation of employees recorded in the Rest of the World account (RoW) of the Norwegian National Accounts (NNA) and the Norwegian Balance of Payments statistics (NBoP).

The specific items on the Rest of the World Account under investigation are important in the transition from Gross Domestic Product (GDP) to Gross National Income (GNI). As the NBoP is a fully integrated part of the NNA<sup>1</sup>, any actions taken to strengthen NNA will have the same quality impact on NBoP data. The items in focus in the project comprise both compensation of employees *to* abroad and compensation of employees *from* abroad, although the main work has for various reasons been concentrated on estimating the former item.

The project as a whole was initiated the summer of 2005 and was finished by 30<sup>st</sup> June 2006. The parts of the project that has been funded by Eurostat started December 2005. Several persons from various departments within the Statistics Norway have contributed to the project<sup>2</sup>.

In total 191 man-hours have been consumed by the project during the period December 1st 2005 - June 30th 2006.

---

<sup>1</sup> Achieved by joint classification structure, estimation procedures and IT-systems operated by the National Accounts Division in Statistics Norway.

<sup>2</sup> See Annex 4 for more details.

## **2. Summary and conclusions**

### **2.1 Summary**

Both compensation of employees to abroad and compensation of employees from abroad have been re-estimated, and the main finding of this exercise is that compensation of employees to abroad, in 2004 is raised 100 per cent, from NOK 6 to 12 billion (0.75 billion Euro to 1.5 billion Euro).

Compensation of employees to abroad has been re-estimated from two separate sets of sources. One set of estimations is based on Tax return statistics in combination with information from the Central Register of Wages and Salaries. Here the nominal value of wages and salaries to abroad can be extracted directly. The other set of estimations uses observations from register based Employment Statistics combined with data from Wage statistics, to arrive at estimated values for wages and salaries to abroad. Compensation of employees from abroad is on the other hand hardly revised at all, estimated at NOK 3.1 billion in 2004. Hence the ratio between compensation of employees debit and credit has been raised from 2:1 to 4:1. This result seems plausible when taking into account recent studies on cross border flows of short term workers in Scandinavia, revealing that there are about 7 times more Swedish workers in Norway compared to the other way round. It is important to recognize that the revised figures are the result of a combination of observations and a set of assumptions, with a varying degree of uncertainty involved.

In particular it should be noted that the estimation of the inflow of compensation of employees is based on rather scarce observable information and a set of more or less disputable assumptions, making the results more uncertain than the outflow of compensation of employees. What is important though, is that the revised figures on compensation of employees from abroad have basis in some current observations in contrast with the old figures that were extrapolated from a rather distant bench-mark period, and using rather dubious extrapolation methods.

A geographical breakdown of compensation of employees to abroad is made using information from the register based Employment Statistics. According to these results, around

40<sup>3</sup> per cent of the total flow of compensation of employees from Norway to abroad in 2004 went to, not surprisingly, our neighbouring country Sweden. It seems to be a clear trend however, that the arrival of workers from the new EU-countries increases more than from other countries. The same source is used to make a breakdown by country of compensation of employees from abroad.

GNI is defined as GDP less net compensation of employees and net investment income to abroad. For the year 2004 GNI has been revised downwards from NOK 1 724 billion to 1 719 billion. For the sake of comparison GDP in 2004 was NOK 1 717 billion.

The report documents some deviations in the use of principles in various underlying statistical sources in defining residency of both producing units and persons. Probably the same variations in definitions can be found between countries. This should be further investigated and to the extent it is correct that such differences exist, the relevant international statistical bodies should place the problem on their table.

The new figures will be introduced in the NNA and NBoP as part of the main revision to be published in December 2006, with revised time series back to 1998. For future current estimations the relevant source information will be available on an annual basis.

## **2.2 Organisation of the report**

The structure of the report reflects the subsequent stages of the project. Chapter 3 gives the general background and objectives of the project. Chapter 4 and 5 describe the theoretical framework for the NNA and NBoP in general and more specific for transactions that are recorded as part of compensation of employees. Chapter 6 explores the potential sources and the information that can be extracted thereof. Chapter 7 deals explicitly with estimation of compensation of employees to abroad based on Labour Force Statistics. Finally, chapter 8 states the final assessments and results.

---

<sup>3</sup> This share is exclusive of foreign sailors on Norwegian operated ships.

## 3. Background and objectives

### 3.1 General background

An important part of the background of the project is the recent change in data collection system for the NBoP. Until 2004 the most important data source was, in addition to the External Trade in Goods Statistics (ETS), the International Transactions Statistics (ITRS) compiled by Norges Bank (the Norwegian central bank). This statistics was based on settlements data from the banking sector in addition to an increasing element of direct reporting from enterprises. For various reasons the ITRS was abandoned at the end of 2004.

In the newly established data collection system for NBoP and the Rest of the World Account (RoW) of the NA, *direct* reporting from the relevant economic units is the dominant method. For the two items under discussion here, however, it was decided that *indirect* information in administrative registers and other existing sources had to be used. This was motivated both by the general policy to minimize report burdens for enterprises, and maybe just as important, the doubt as to whether the reporting units would be able to distinguish, on NA terms, between resident and non-resident employees.

Compensation of employees to abroad and compensation of employees from abroad have historically been two items of minor importance in the NNA. This is true when compared both to total compensation of employees in the Norwegian economy and to other items involved in the transitions from GDP to GNI. There are however, clear indications that these transactions are of higher importance today than only a few years ago. Administrative information and recent surveys, as well as the fact that the EEA expanded from 18 to 28 countries in 2004, followed by an increasing number of cross border workers and job seekers, indicates that these flows need to be assessed in a more detailed manner than before. In this respect one can also point to the Eurostat comments<sup>4</sup> on the NNA inventory, stating that certain aspects of the cross border flows of compensation of employees need re-evaluation.

---

<sup>4</sup> See Eurostat report: Report of GNI mission to Norway - 2004. Eurostat/C1/GNI C/045 EN.

### **3.2 Current sources and results**

Compensation of employees to abroad (debit) is in the current RoW and NBoP in broad terms defined according to ESA95 and BPM5. In Norwegian statistics, this item in the past mainly consisted of compensation to non-resident seamen and compensation to non-resident pilots (and other aircrew members) employed by the Scandinavian Airline System (SAS). The sources traditionally used have been Maritime Transport Statistics, information from the Norwegian Shipowner's Association and accounting data from SAS. Previously, no estimation was made for compensation of employees to other groups of non-residents. In the last main revision of the NNA published in 2002, a new source, tax authorities' data, was introduced, leading to a shift upwards in the level of the flow of compensation of employees to abroad. In recent times some additional estimates have been made out of consideration for the increased work immigration, especially connected to the construction business.

Compensation of employees from abroad (credit) relates to Norwegians working abroad or for non-resident employers operating in Norway. This item has traditionally been estimated as a total, and also here a shift upwards was made in the last main revision. Not so much based on new information as due to the revision on the debit side. It was clearly recognized at the time that the credit side was the most uncertain, and that further improvements of the data were required.

A weakness of the current figures for compensation of employees both to and from abroad, is that there is currently no recording of the corresponding flows of employer's social contributions to and from abroad.

For the year 2004 compensation of employees to abroad in the current statistics are estimated at NOK 5.8 billion, of which about NOK 2.5 to non-resident sailors. Compensation of employees from abroad is estimated at NOK 2.6 billion. That is a ratio of roughly speaking 2:1 between debit and credit.

### **3.3 Objectives**

The objectives of the project has been to

- improve the RoW and NBoP estimates for compensation of employees to and from abroad
- establish revised time-series for the above mentioned items and integrate the revised figures in the NNA in a consistent manner
- discuss operational methods for estimating above mentioned items from administrative sources and
- assess the practical aspects of adopting resident/non-resident principles of the ESA versus corresponding principles of population and labour force statistics.

## 4. National Accounts framework - Rest of the World Account

### 4.1 Fundamental concepts

A fundamental concept of the ESA95, SNA93 and the BPM5<sup>5</sup> is the notion of *economic units*. The primary economic units identified in the NA and BoP statistics are called institutional units. The characteristics of these units are that they are:

- capable in legal terms of owning assets and incurring liabilities on own behalf
- able to engage themselves in the full range of economic transactions
- centres of legal responsibility and hence centres of decision making for all aspects of economic life.

The institutional units are grouped together to form institutional *sectors*, on the basis of their principal economic function, behaviour and objectives. Examples of such sectors are non-financial and financial corporations, households and general government.

The total economy of a country is also defined in terms of institutional units. It consists of (the economy of) all the institutional units that are *resident* of the *economic territory* of a country. An institutional unit is said to be a resident unit of a country when it has a *centre of economic interest* in the economic territory of that country.

This leads to the necessity of defining economic territory and centre of economic interest. Without elaborating definitions in detail, we should note that the economic territory of a country essentially consists of its geographic territory, but do not coincide exactly as some additions and subtractions are made. One example is embassies located in other countries, another is mobile equipments<sup>6</sup> like ships and aircraft moving between and within different countries' territory.

---

<sup>5</sup> SNA93=System of National Accounts, the prevailing international global guidelines for national accounting.  
ESA95= the corresponding EEA guidelines (legal status).  
BPM5=Balance of Payments Manual, 5th edition.

<sup>6</sup> It is probably a bit deceptive to refer to mobile equipment as part of a country's economic territory. Ships and aircrafts and its like constitute *units of production capital* operated inside or outside a country's economic territory. However, as seen later, in the discussion of the residency of ship crew members, the vessels they are working onboard has been referred to.

An institutional unit is said to have a centre of economic interest in a country when it engages in economic activities on the country's territory for an extended period, one year or more being taken as a practical guideline.

Resident units as defined above, engage in transactions with non-resident units, i.e. units that are residents of other economies. These transactions are in the ESA and SNA referred to as the *external transactions* of the economy and recorded on the *Rest of the World* account, and constitutes at the same time the Balance of Payments (BOP) of the country.

#### **4.2 Compensation of employees**

The Norwegian Labour Accounts constitute an integrated sub-system, or satellite, of the NNA in which estimates of employed persons, full-time equivalent persons, hours worked, compensation of employees and wages and salaries are compiled in a consistent and coherent manner. This facilitates analyses of productivity in the production of goods and services across industries, an important property and purpose of the NNA.

Employment includes employed persons who, by mutual agreement, work for another institutional unit and receive a remuneration recorded as compensation of employees. Owners of corporations (joint-stock companies etc.) if they work in these enterprises, are counted as employees. Self-employed persons are persons who are sole owners, or joint owners, of the unincorporated enterprises in which they work. Family workers without remuneration in contract, and working in an enterprise owned by another family member, are recorded as self-employed.

Until now jobs has not been a separate variable in the Norwegian Labour Accounts. This variable will however, be introduced as part of the on-going main revision of the NNA, to be published December 2006.

Compensation of employees covers both wages and salaries, and employers' social contributions to pension funds of which the employees are members. Wages and salaries are both in cash and in kind. Wages and salaries in cash include pay for overtime, and sickness and maternity allowances paid by employers. Wages and salaries in kind consist of goods and services, or other benefits, provided free or at reduced prices by employers that can be used

by employees at their own discretion. Wages and salaries in kind include, inter alia, the services of vehicles, value of the interest forgone by employers when they provide loans to employees at reduced rates of interest, and free transportation for employees in some transport industries.

Wages and salaries subsequently are distributed to households and to rest-of-the world (i.e. for non-residents employed by resident producers).

The NNA also makes use of the concept of population, to be able to present data per capita, such as GDP per capita. The figure for the population normally takes form of an average annual figure.

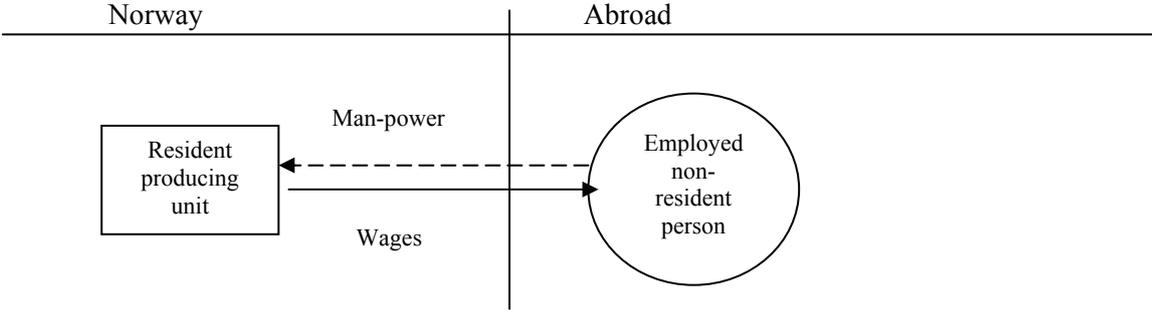
# 5. The Rest of the World Account and Compensation of Employees

## 5.1 Cross border workers - compensation of non-resident employees

The fundamental criterion for the recording of compensation of employees on the RoW account and in the BoP, is that there exists a employer/employee relation between a resident unit and a non-resident unit. Whenever a resident production unit employs the man-power of a non-resident person in the production process in which it is engaged, a flow of compensation to abroad is generated. The other way around, when a resident person is employed by a non-resident employer, a flow of compensation of employees from abroad is generated.

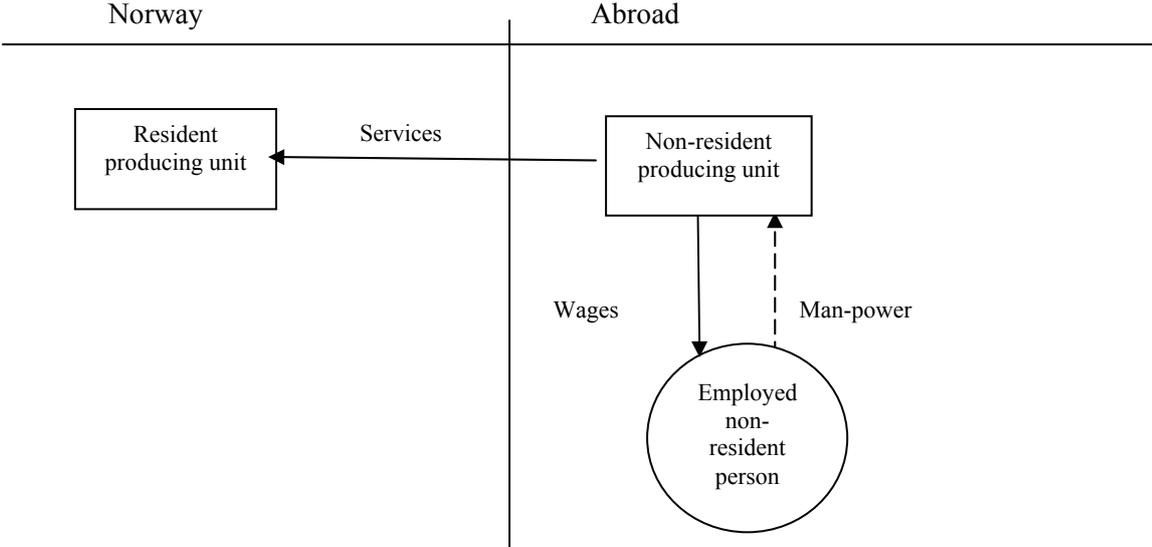
Figure 1 illustrates the situation of a resident producer and a non-resident person supplying man-power into Norwegian production.

Figure 1: Cross-border employment



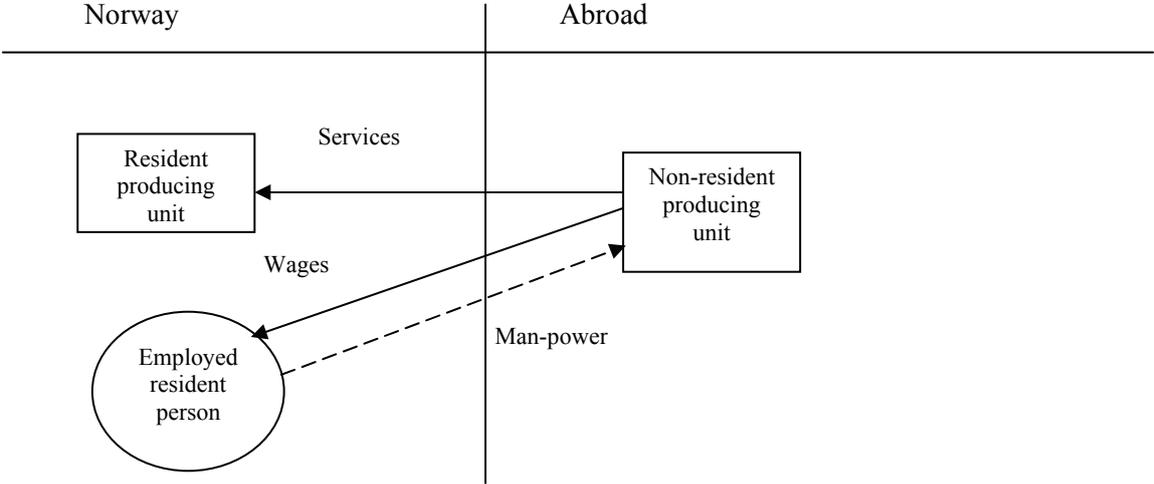
In many situations, even though a person physically moves across borders, man-power in economic terms is not directly supplied across the borders. The relationship between a resident producer and a non-resident person supplying manpower into production in such situations takes a more indirect form. For example a non-resident person can be employed by a non-resident producing unit, which in turn supplies services to a resident producing unit. This represents *international trade in services* and is illustrated by figure 2.

Figure 2: International trade in services



A third situation shows a resident person employed by a non-resident producing unit, in turn supplying services to a resident producing unit. Here, both international trade in services and cross-border flows of compensation of employees are generated. This situation is shown in figure 3.

Figure 3: Cross-border employment + international trade in services



The situations described in the figures 2 and 3 involve international services transactions between residents and non-residents, in these cases imports of services into Norway. Figure 3 in addition involves a flow of compensation of employees from abroad. Probably not an insignificant share of the short-term movements of non-resident workers into Norway in the most recent years, represent imports of services instead of relationship between a resident

employee and a non-resident employer generating compensation of employees to abroad. These flows of services will in principle be captured by the established statistics on exports and imports of services<sup>7</sup>.

According to ESA95 employment in the National Accounts covers all persons, both residents and non-residents, engaged in some productive activity within the defined production boundary. Employees are defined as all persons who, by agreement, work for another resident institutional unit and receive remuneration.

In particular employment includes the following categories:

1. Non-resident frontier workers
2. Non-resident seasonal workers
3. Members of the country's armed forces stationed in the rest of the world
4. Nationals who are on the staff of national scientific bases established outside the geographic territory of the country
5. Nationals who are on the staff of diplomatic missions abroad
6. Members of the crews of fishing boats, other ships, aircrafts and floating platforms operated by resident units
7. Local employees of general bodies outside the economic territory.

Non-resident persons will appear under the categories 1., 2., 6., and 7. To reveal the difference between the employment figures of the NA and the employment statistics, ESA recommends separately presentation of the following categories:

1. Non-resident persons employed by resident producing units (part of employment in NA, but not in employment statistics)
2. Resident persons employed by non-resident producing units (included in employment statistics, but not part of employment in NA).

According to ESA category 1 is a *domestic* concept and category 2 a *national* concept.

---

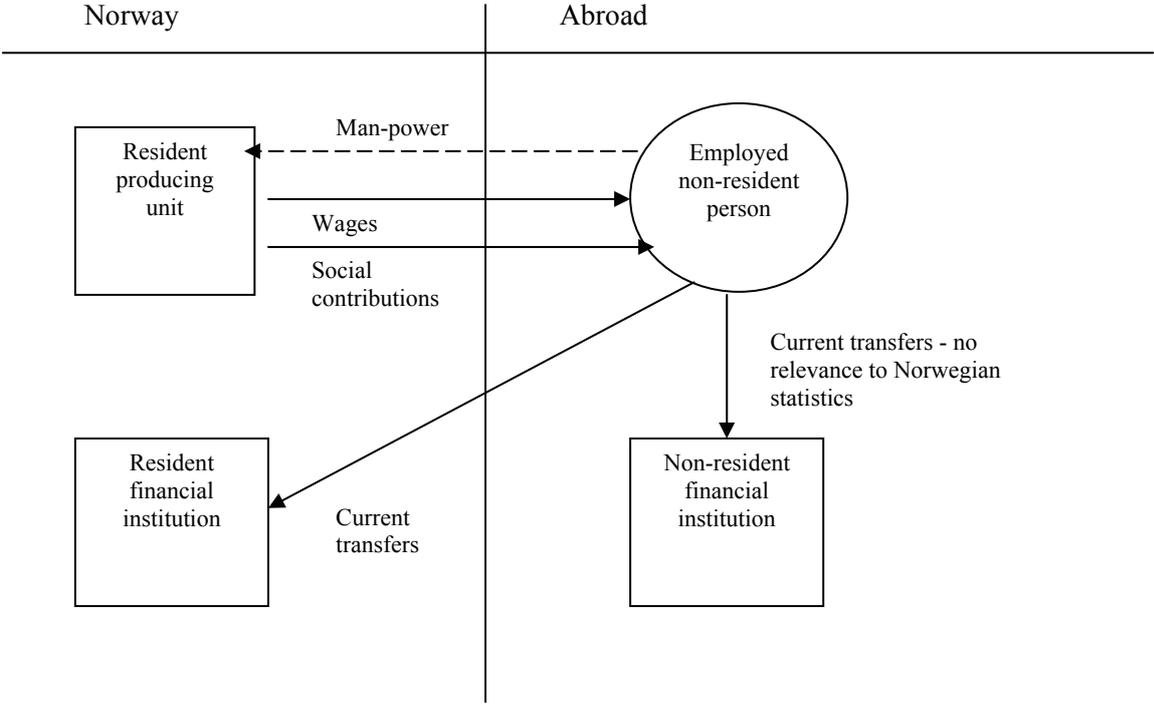
<sup>7</sup> It should also be noted that the many media reports on low wages payments to short-term non-resident workers in Norway (social dumping), probably applies to situations described by figure 2.

### 5.2 Employers' social contributions

In the National Accounts (and thus in BoP statistics) compensation of employees comprises both wages and salaries and employers' social security contributions. These contributions or premiums are recorded as parallel flows to the flows of wages and salaries, i.e. as income of the employee. The employee (the household sector) then in turn will use the employers' contribution by paying the financial institutions administrating the social security schemes. This flow is to be recorded as part of current transfers. In the real world of course the payments normally go directly from the employers to the financial institutions involved.

This conventional chosen principle of recording, called *re-routing*, is also followed when the employee is a non-resident, implying that premiums also are recorded as a flow to the rest of the world. The next question is whether the financial institutions involved are resident or non-resident. Are they residents, the premiums will have to be recorded as an inflow from the rest of the world, not as part of compensation of employees, but rather as current transfers. Are the involved financial institutions non-residents, the premiums will in principle not re-enter the Norwegian economy, but be recorded as a flow between non-resident households and non-resident financial sources, and as such be of no relevance to the NNA and NBoP.

Figure 4: Compensation of employees and employers' social contributions



## 5.3 Special features

### 5.3.1 Non-resident sailors

For Norway it has been assumed that the outflow of compensation of employees dominate over the inflows. The main reason for this is the relative large number of non-resident sailors employed onboard Norwegian operated ships. Today about 50 000 persons work onboard Norwegian owned and Norwegian operated ships in ocean water transportation. Two questions about those sailors must be answered. First, how many are employed by domestic shipping enterprises, i.e. resident institutional units? Secondly, how many of the employees are non-resident sailors?

Until 1995, all sailors on Norwegian operated ships were regarded residents of Norway, i.e. members of the resident household sector. The argument used was that the foreign sailors spent most of their time on ships that were regarded as part of the Norwegian economic territory (see footnote 5, page 10). Statistics on nationality of the foreign sailors were used to estimate two flows on the RoW account and in the NBoP:

1. It was assumed that sailors of foreign nationality spent a portion of their salaries abroad, recorded as part of the Travel item, debit.
2. The remaining part of their salaries was assumed sent back to their home countries and recorded as Transfers (current) to abroad.

In the main revision of the NNA published in 1995, this treatment was changed. From that moment on all sailors onboard Norwegian operated ships with foreign nationality were regarded non-residents, and their enumeration recorded as compensation to abroad.

Recently, the question has been raised whether foreign sailors onboard Norwegian operated ships correctly can be regarded Norwegian employment or if the expenses of the Norwegian shipping enterprises more correctly is payments for services imported from abroad. It seems to be a trend that more sailors now have their working contract with a non-resident enterprise hiring out crewmembers. After consultation with representatives for the Norwegian Shipowner's Association it was concluded that this type of arrangement still occurs more

seldom, and it was decided to keep up the current practice. However, because of the clear trend a change in recording must be closely discussed at the next junction<sup>8</sup>.

### **5.3.2 SAS-pilots and other SAS-crewmembers**

The Scandinavian Airline System (SAS) has ever since its foundation (1946) been a Scandinavian joint venture, involving the Swedish, Danish and Norwegian governments, and with legal registration of the company in all three countries. The question of residency of the company in a statistical context was solved by allocating all transactions and assets and liabilities to the involved countries according to their proportion of the shares in the equity of the corporation (relative weights: 3/7 for Sweden, 2/7 for Denmark and 2/7 for Norway)<sup>9</sup>.

The implication of the recording principles is that total income and total costs are allocated according to the ownership principle, including wages and salaries to pilots and other crewmembers. This in turn generates flows of compensation of employees across the Scandinavian borders. For Norway the result has been a net outflow of compensation of employees roughly speaking in the size of 10 per cent of the flow in connection with non-resident sailors on Norwegian ships.

---

<sup>8</sup> For a general introduction to the principles followed in recording Norwegian shipping activities, see Halvorsen (1993).

<sup>9</sup> Due to recent reorganisation, the recording of SAS in the statistics is at the moment under review. For more information see Halvorsen (2002).

## **6. Compensation of employees to abroad - sources and direct estimations**

### **6.1 Resident employers**

#### **6.1.1 The enterprise sector - the Central Register of Establishments and Enterprises (CEE)**

As stated in chapter 5, compensation of employees is generated across country borders when the employer is resident of one country and the employee is resident of another country.

Compensation of employees debit for Norway thus represents transactions between Norwegian employers and employees that are resident of other countries. The main emphasis in this report is on the flow of compensation to abroad. The following describes the potential sources containing information on those transactions. It is organised in two parts; the first deals with sources of information on the resident employers, and the second part focus on sources of information on non-resident employees.

What is the operational criterion used to decide who is a resident employer in the economic statistics in general, and consequently in the NA?

The starting point of all statistical surveys on the business sectors in Norway is the Central Register of Establishments and Enterprises (CEE), kept and maintained by Statistics Norway. *Registration in CEE is thus the main operational criterion used in defining the resident population of employers in the economic statistics.* CEE is updated continuously with information from the Central Coordinating Register of Legal Entities (ENR) and its affiliated registers. The most important of among those affiliated registers are, the Value Added Tax Register (VATR), the Register of Employers/Employees (REE) and the Central Office - Foreign Taxation Affairs (COFTA). The population of the CEE is also maintained through the work on the Structural Business statistics itself and through the routine direct contact with enterprises.

All non-resident enterprise units starting trade or industry activities in Norway are registered in the ER through the affiliated registers. The registration is effectuated on a continuously basis with no time-constraints or time lag other than the time that the registration procedure itself consumes when registering a new enterprise. This means that a foreign enterprise planning to operate in Norway for a limited period of say only a few months, but choose for

some reason or another to register (for example to be allowed to open a separate bank account in a local bank), will be part of the statistical resident enterprise population. According to the principles of the NA however, such an enterprise is deemed to be a non-resident due to its centre of economic interest being abroad. Practically speaking there might be a minimal risk of having such a unit drawn into a survey sample of the Structural Business Statistics (SBS), and even less of a chance of having data reported back. There can however, be a risk that such a unit may distort the necessary grossing up procedure of the SBS.

The rules and regulations concerning registration of enterprise units in the relevant registers and ultimately in the CEE, thus do not conform with the definitions of residency embodied in the NA recommendations. The "centre of economic interest" criterion or the more pragmatic one-year rule of the NA is not employed in the register and the population of resident producing units will in practice deviate compared to the theoretically correct NA defined population. To this observation two important comments can be made. First, maybe it will for analytical purposes be just as important to have symmetry between compensation of employees and employment data at one hand, and production data at the other, that is to use the same resident criteria for production and employment, as to have the former recorded according to the more formal NA principles represented by the more operational one-year rule.

Secondly, the rules for registration in statistical source registers (business registers) probably will be different across countries. If this is the case, the risk of double counting, that is counting the activities of one and the same producing unit in two separate countries' GDP, is clearly present.

#### **6.1.2 Other types of resident employers**

It is recognized that some non-resident employees will supply their labour to resident employers that are not registered either in the CEE or in other registers. In principle every unit engaging workers and paying wages and salaries above a certain threshold, are obliged to report to the Central Register of Wages and Salaries (CRWS)<sup>10</sup>. To the extent that these obligations are not met, the problem must be regarded part of the general question of how to

---

<sup>10</sup> End of the Year Certificate Register collected by the Directorate of Taxes. All employers that have paid remunerations to employees during the year are required to send an end of the year certificate to the local revenue authorities or the Directorate of Tax. For some type of activities (domestic services), the reporting obligations are on more easy terms than for others.

capture the non-registered economy in the NA. This problem is not further investigated in this project.

## **6.2 Non-resident employees**

### **6.2.1 Labour force statistics**

Both the traditional survey based Labour Force statistics (LFS) and the register-based Labour Force statistics comprise all persons that are working in Norway and at the same time are residents of Norway. Working in Norway implies a work contract with an enterprise registered in Norway. The residence concept used in the LFS for persons is defined to comprise all persons registered as residents in the Central Population Register. Practically speaking this means all persons living in Norway more than 6 months. The international recommendations on the residence principle to be used in Population statistics are rather vague and Statistics Norway has chosen an operational rule (6 months) that seems to be in the middle of the road compared to other countries.

In recent years, following the surge in cross-border movements of workers and job seekers, an additional register based Labour Force statistics<sup>11</sup> has emerged, including workers that are not residents, that is expected to stay less than 6 months. The basis for the new statistics is the various obligations to submit reports to various authorities and registers. The following are the most important sources:

- Register of Employers/Employees (REE)
- Central Register of Wages and Salaries (CRWS)
- Central Office of Foreign Tax Affairs (COFTA)

The statistics presents data showing non-resident employees on professional stays in Norway, measured in the 4<sup>th</sup> quarter, both those that have resident employers and those that have non-resident employers. The last category will not generate a flow of compensation of employees to abroad in NA and BoP terms, but rather represents imports of services to Norway. To be able to exclude this group of workers in the estimation of compensation of employees to abroad, a link is made with the Central Register of Establishments and Enterprises (CEE). This way an estimate of non-resident employees employed by resident employers is arrived at. For the 4<sup>th</sup> quarter year 2004 the estimated figure is 30 000 persons, rising from about

25 000 the previous year. We assume that this figure is also a fair estimate of the average annual number<sup>12</sup>.

The definition of residency underlying this estimation is *not* in line with the principles of the NA. In short the population of resident employers probably contain a number of enterprises on a shorter stay in Norway than one year, and in any case on such a short term basis that they under no circumstances ought to be regarded as residents of Norway. However, as also discussed in 6.1.1, the adoption of the one-year rule (a rule of thumb) may be of less importance compared to having *symmetry* between *production* account data and *labour* account data in the NA. There seems to be a problem though that SBS for different industries follow different procedures in defining the resident population underlying their production statistics.

To the degree that the various countries in practice do not follow the one-year rule in their business registers, and the definition of residency varies across countries, the implication may be that one single enterprise unit may contribute with its total annual value added to different countries' GDP. Also one and the same person, if included as resident in two separate countries' population registers, may in one and the same period contribute simultaneously with his or hers total income and net worth in the household sectors of both of the countries.

The only solution to this problem is to

- harmonise between NA principles and the Population statistics and Business register principles, and
- may be just as important, especially when concerning EU and EEA aggregates, harmonise the principles adopted in Population statistics and Business registers across countries.

It is of this report's recommendations to have international statistical organisations pursuit and analyses these potential problems. In an ideal world one specific unit, being it a enterprise

---

<sup>11</sup> The first period covered by this new statistics was the 4<sup>th</sup> quarter of 2003.

<sup>12</sup> Norges Bank, in their recent publication “Inflasjonsrapport – 2/06” (table 2 page 50), estimates that in total 46 000 non-resident employees were working in Norway during 2004. Our figure is on the other hand an estimate on the average number of non-resident employees working for resident employers *at any point of time*.

unit or a person, will be deemed resident of one and only one country at a specific point or period of time. That is the principle of *exclusivity* should be adopted across countries.

### **6.2.2 Tax Return Statistics (register) (TRS)**

This is a register of personal tax payers kept by the Directorate of Taxes and comprise all individuals, both residents and non-residents, obliged to leave a tax return form with Norwegian taxation authorities. The individuals are sorted into 12 categories of taxpayers, of which 6 categories are labelled non-residents. It appears however that the non-resident concept used is not defined in a coherent manner among the local tax authorities, and thus it is not a sufficient consistent characteristic to be used for our purposes. It appears that it may take 4 years before an individual who is initially labelled non-resident, is given a resident code and reclassified as resident. For this reason the persons categorised as non-residents in the Tax Return register are linked to the Central Population register to leave out those individuals that are defined as residents according to the Population statistics, i.e. living more than 6 months in Norway.

This exercise results in an estimate of compensation of non-resident employees for the year 2004 of NOK 10.9 billion, that is 1.3 billion Euro. This amount includes however, wages and salaries not only from resident employers, but also from non-resident employers operating on a short-term basis in Norway. Therefore a linkage with the Central Register of Wages and Salaries are needed.

### **6.2.3 Link between Central Register of Wages and Salaries and Tax Return Register**

By combining the CRWS and the TRR we achieve the following:

1. The total population of *non-resident employees* on short-term work stay in Norway follows from the link between the Tax Return Register and the Central Population Register.
2. This population is further limited to those with a work contract with *resident employers* through a link with the Central Register of Wages and Salaries. The link is represented by the *organisational code* given to all enterprise units and used in both the Tax Return Register and in the Central Register of Wages and Salaries.

This exercise gives an estimate on compensation of employees to abroad of NOK 9.1 billion.

### 6.3 Summary: Non-resident employees in Norway – compensation of employees to abroad

Two different kinds of sources are explored. On the one hand Labour Force statistics based on administrative registers give an estimate of 30 000 non-residents employees working in Norway in 2004 and having resident employers.

The other set of sources combines information from the Tax Return Register and the Central Register of Wages and Salaries. From these sources an estimate on the amount of wages and salaries from resident employers to non-resident employees in 2004 is made. The results of the two estimation exercises are shown in table 1.

Table 1: Non-resident employees and wages and salaries to abroad. 2004

<b>Statistics</b>	<b>Non-resident employees (Persons)</b>	<b>Wages and salaries (Billion NOK)</b>	<b>Sources</b>
Labour force statistics	30 000		RES, CRWS, COFTA
Tax return statistics		9.1	REE/CRWS

## 7. Compensation of employees to abroad: estimation based on Labour Force Statistics

Chapter 6.3 concluded that two sets of sources are relevant in estimating compensation of employees to abroad. The first is a combination of Tax Return data and data from the Central Register of Wages and Salaries. Based on these sources the nominal value of wages and salaries to non-resident employees working inside Norway for resident employers can be estimated directly.

The other source is the register based Labour Force statistics. According to data from this source 30 000 non-residents were working in Norway and employed by resident employers in 2004. This information is used to make estimations of compensation of non-resident employees complementary to those based on the first set of sources.

To do an estimate on the nominal value of compensation of employees corresponding to the 30 000 non-resident persons working in Norway, a further set of assumptions must be made.

A separate study<sup>13</sup> indicates that about 20 per cent of the non-residents were working part time. We do not know exactly their average part time share, but the study indicates an average part time percentage of 35 among those who works part-time. Roughly speaking, this corresponds to each employee on the average supplies 0.87<sup>14</sup> man-years.

$$(1) 30\ 000\ \text{persons} * 0.87\ \text{man-years/person} = 26\ 100^{15}\ \text{man-years.}$$

Statistics Norway's Wage Statistics give some information on the level of wage rates for non-residents compared to resident employees. According to this, non-residents receive wages and salaries that are about 10 per cent lower than the average wages and salaries for all Norwegian employees in 2004, which were NOK 347 000.

---

<sup>13</sup> Berge, Næsheim and Østvedt (2006): see table 4.9 page 27.

<sup>14</sup> 80% working full-time (100%) = 30 000 persons x 0.80 = 24 000 man-years  
+ 20% working part-time (35%) = 30 000 persons x 0.20 x 0.35 man-years/person = 2 100 man-years  
= 26 100 man-years. 26 100/30 000 = 0.87.

<sup>15</sup> The Norges Bank report, referred to in footnote 11 on page 21, also presents an estimate of the number of man-years supplied by non-resident employees in 2004. The bank's estimate is 27 300 man-years. This includes non-resident employees working for non-resident employers in Norway, which are excluded in our figure.

$$(2) \text{ NOK } 347\,000 \text{ per man-year} * 0.90 = \text{NOK } 312\,300 \text{ per man-year.}$$

Total wages and salaries received by non-residents covered by the Labour Force statistics thus are:

$$(3) 26\,100 \text{ man-years} * \text{NOK } 312\,300/\text{man-year} = \text{NOK } 8\,151 \text{ million.}$$

Comparing this to the result when the Tax Return data (NOK 9.1 billion) are used, we find a difference of NOK 1 billion only. This makes us conclude that the two sets of estimations both confirm the need of a clear upward revision of the figures compared to those currently used. Secondly, acknowledging the uncertainty of both sets of estimations, we also conclude that the two methods indicate roughly the same level. Finally, we chose to use the results from the estimations based on the Labour Force statistics, i.e. NOK 8.1 billion in 2004, as this figure ensures consistency with the Labour Accounts data of the NA.

For estimation of time-series back to 2000, an indicator based on data in the Register of Employers/Employees is used. All persons arriving in Norway that do not have a Norwegian personal code are assigned to a so-called D-number until they are given the personal code. The indicator was then based on the development in number of person each year assigned to a D-number.

We have no information on the development in the rate of part-time work prior to 2004. We therefore assume that on the average, each person annually supplies 0.87 man-years, the same as in 2004. Also, according to the Wage Statistics<sup>16</sup> the average wage of non-residents compared to the wages paid out to residents, have declined from 100 per cent in the 1990s to about 90 per cent in 2004. This has been taken into account when establishing the figures for wage-rates used in the estimations.

To be able to estimate not only wages and salaries but also employers' premium contributions and thus compensation of employees in total, an assumption on the share of the premiums to the total amount of compensation is made. The share is assumed to be 10 per cent. For the Norwegian economy in total this share is observed to be 22 per cent. For non-resident sailors

---

<sup>16</sup> Grini (2005): see figure 5.

on Norwegian operated ships, the share has been about 4 per cent. Table 2 summarises the estimations and the results.

Table 2: Compensation of employees to non-residents, exclusive sailors etc.

<b>Non-residents exclusive sailors, SAS-pilots and employees at Norwegian embassies abroad</b>							
Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Employed persons	Average man-years per employed person	= (1)*(2) Man-years	Wages and salaries per man-year	= (6)*1.1 Compensation of employees	= (3)*(4) Wages and salaries	= (5)-(6) Employers' social contributions
	Number	Per cent	Number	NOK		NOK	
2004	30000	87	26100	312300	8966	8151	815
2003	24600	87	21402	299700	7056	6414	642
2002	24600	87	21402	288000	6780	6164	616
2001	22300	87	19401	288800	6163	5603	560
2000	19800	87	17226	289000	5476	4978	498

## 8. Final assessment and results

### 8.1 Compensation of employees to abroad

As described in chapter 5, compensation of employees to non-residents occur both in situations when non-residents work for resident employers inside Norway, and when the work takes part outside Norway. The estimations in the previous chapters concern for the most part the former category. The most important case of the latter category is foreign sailors working on Norwegian operated ships. The figures for compensation of employees to non-resident sailors have for several decades been estimated based on the Maritime Transport Statistics of Statistics Norway and on information from Norwegian Shipowners' Association. Those figures have not been subject to revision.

Table 3: Compensation of non-resident sailors.

	<b>Non-resident sailors</b>		
	Million NOK		
	(1) = (2)+(3) Compensation of employees	(2) Wages and salaries	(3) Employers' social contributions
Year			
2004	2400	2300	100
2003	2655	2577	78
2002	3034	2946	88
2001	3345	3223	122
2000	3268	3149	119

In addition, as explained in chapter 5.3.2, Norway is debited with 2/7 of all compensation of employees to pilots and cabin personnel in Scandinavian Airline System (SAS), giving rise to a net outflow of compensation to non-resident employees. Lastly, we have estimated compensation of employees related to local non-residents working as staff at Norwegian embassies abroad. The source data used for this estimation is expenses on wages and salaries to personnel at Norwegian embassies according to the Central Government Accounts. We assume that 25 per cent is payments to local employees. For the last two groups we assume that no employers' social contributions are paid, as the figures are relatively small.

Table 4: Compensation of employees to SAS crew and local employees at Norwegian embassies abroad.

Year	Wages and salaries for SAS-crew and local employees at Norwegian embassies abroad	
	Million NOK	
	SAS-crew	Embassy employees
2004	564	70
2003	352	68
2002	479	
2001	586	
2000	594	

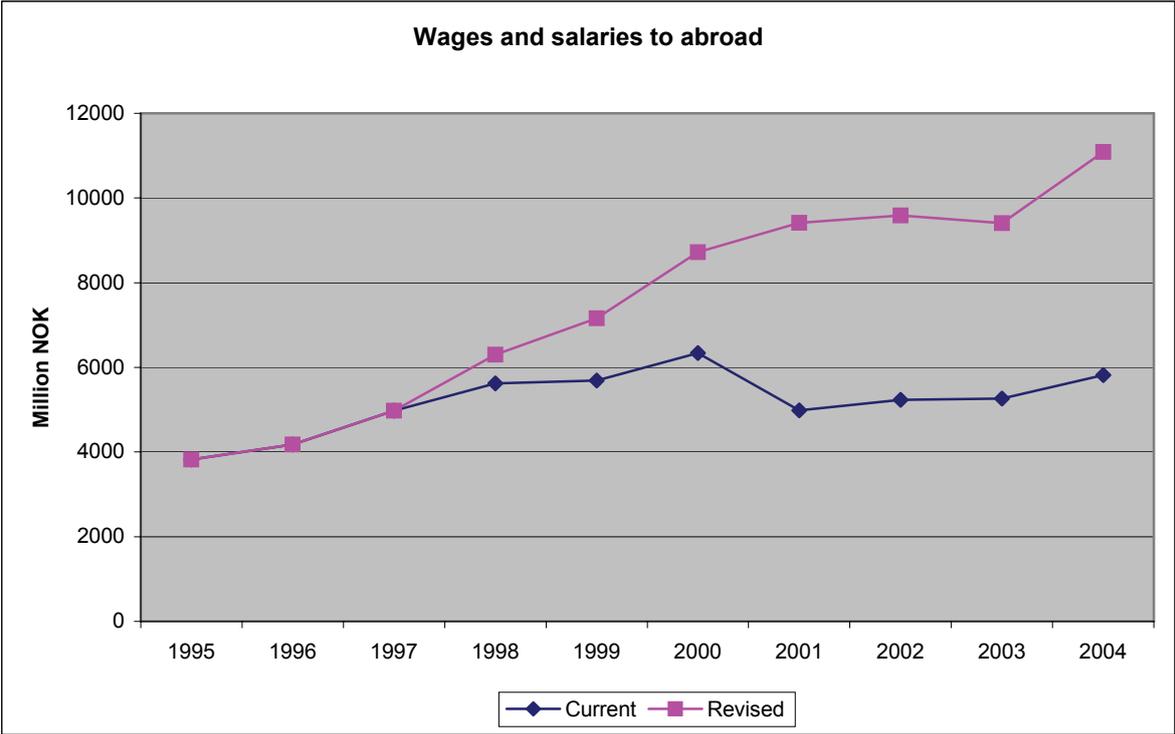
By adding the figures of the tables 2, 3 and 4, and by smoothing the time series back to 1997, we arrive at table 5. Here, a comparison to the current figures of the BoP and RoW accounts is also shown. As seen from this table, only the item wages and salaries have previously been estimated.

Table 5: Compensation to non-resident employees in total.

Year	Revised compensation of employees to abroad			Current figures
	Million NOK			
	(1) = (2)+(3) Compensation of employees	(2) Wages and salaries	(3) Employers' social contributions	(4) Wages and salaries
2004	12000	11085	915	5822
2003	10130	9410	719	5261
2002	10293	9589	704	5223
2001	10096	9414	682	4985
2000	9338	8721	617	6338
1999	7473	7163	310	5694
1998	6481	6481	180	5625
1997	4974	4974	0	4974

In figure 5 the results for wages and salaries are shown as two graphs, one for the currently used time series and one for the revised time series.

Figure 5: Revisions of compensation of employees to abroad, 1995 - 2004.



One comment can be made on the new figures for the years 2002 and 2003. The decline is mainly due to a reduction in compensation of employees to non-resident sailors. The reasons being partly a decrease in the Norwegian fleet, and thus in the number of foreign sailors on Norwegian operated ships, and partly the movements of the exchange rate between NOK and US\$. Wages and salaries to non-resident sailors are to a large extent paid out in US dollars.

**8.2 Compensation of employees from abroad - Norwegian resident employees and non-resident employers**

The current figures in the Norwegian BoP and RoW account for the item compensation of employees *from* abroad have a weak foundation. The estimation is of an arbitrary nature and with no firm basis in recent observations. The figures have been extrapolated from a benchmarking analysis made almost two decades ago. The extrapolation has at least for the last ten years been based on the development of the corresponding item on the debit side, i.e. compensation of employees *to* abroad. It has therefore been necessary to look for some information in the administrative sources to validate (or invalidate) the figures used.

The only source of some potential for use for our purpose seems to be the Tax Return Register.

Residents working abroad and having work contract with non-resident employers are obliged to report their income in terms of wages and salaries to the Norwegian Tax authorities, even when not taxed in Norway. The main rule is that income from work is taxed in the country the activity is taking place.

Wages and salaries from non-resident employers are not specified on the tax return form submitted by the employee to the tax authorities. What is available though, is the taxpayer's claim of tax deduction based on taxes paid to other countries. Assuming the tax ratio is the same in Norway as in the other countries where the wages are earned and taxes paid, and also assuming that the ratio of wages and salaries to total income is the same for income earned in Norway and income earned abroad, an estimation of wages and salaries earned abroad can be made.

In 2004 the tax deduction item amounted to NOK 590 million, while total tax on income for personal taxpayers was NOK 175 billion. Total wages and salaries earned by Norwegian employees amounted to NOK 677 billion. Thus in line with the above reasoning, wages earned abroad can be estimated to:

$$(4) \text{ NOK } 677 \text{ billion} \times 0,599/175 = \text{NOK } 2 \text{ 280 million.}$$

In addition domestic employees have wages and salaries from non-resident employers in connection with work carried out in Norway. This represents income that is not subject to tax deduction as it is earned in Norway and thus not subject to taxation abroad. We have no information of the size of this component and assume it amounts to 25 per cent of the wages earned abroad. The total wages and salaries earned by resident employees from non-resident employers then amounts to:

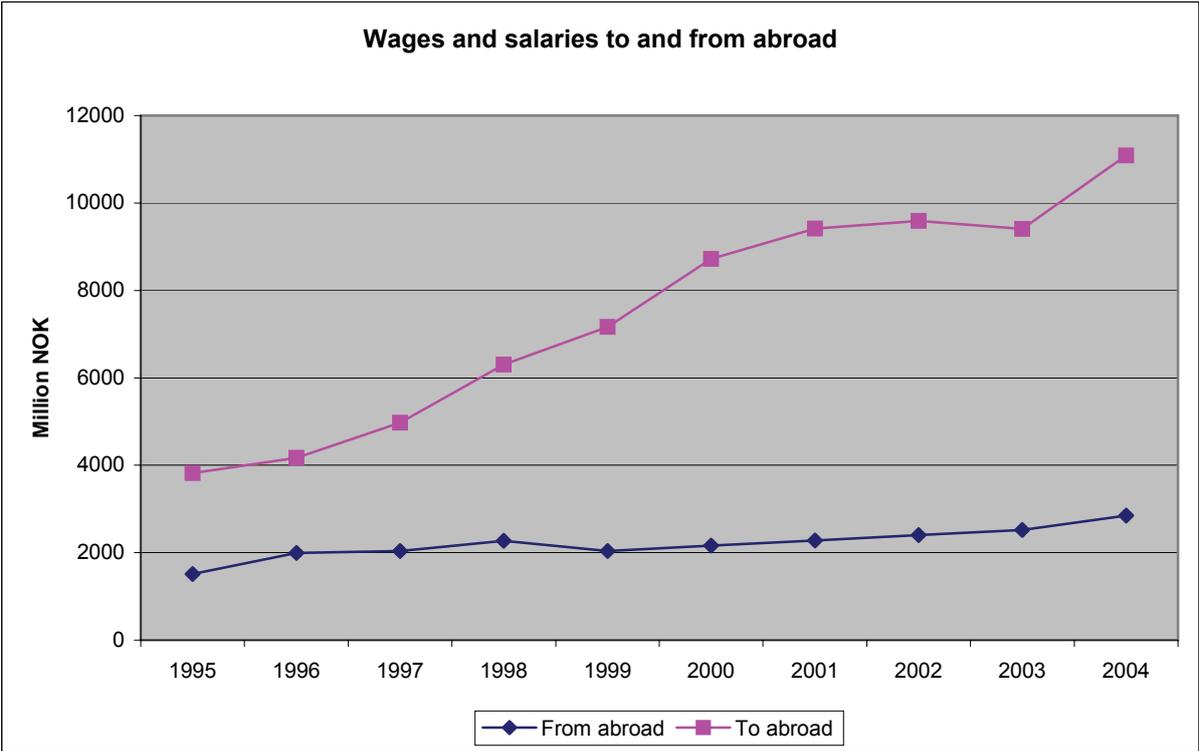
$$(5) \text{ NOK } 2 \text{ 280 billion} \times 1.25 = \text{NOK } 2 \text{ 850 billion.}$$

The current estimate in the BoP and RoW account is NOK 2 640, almost the same figure. Even when the new estimate is introduced for 2004, there seem to be no reason for revise time series for this flow in the Norwegian statistics. Also, the estimation procedures described above will in the future be repeated annually based on the Tax Return Register information.

To estimate the employers' social contribution related to wages and salaries from abroad we use the same proportion between the respective components as used on the debit side. This results in an estimate of total compensation of employees from abroad of NOK 3.1 billion. The time series for employers' social contributions have been brought back to 1998.

Figure 6 shows wages and salaries to and from abroad according to the revised figures.

Figure 6: Wages and salaries to and from abroad



### 8.3 Gross National Income

The Gross National Income (GNI) is defined as Gross Domestic Product (GDP) less net compensation of employees and net investment income to abroad. For the year 2004 GNI has

been revised downwards from NOK 1 724 billion to 1 719 billion. For comparison GDP in 2004 was NOK 1 717 billion.

#### **8.4 Geographical breakdown**

Both Eurostat and other interested parties request that income items on the RoW and BoP are broken down by partner country. Among the sources we have explored, at least one, the register based Labour Force Statistics on short-term work stays, includes information that can be exploited in a geographical allocation of compensation of employees to abroad.

The information on the non-resident employees' country origin is found in Statistics Norway's Central Population Register. By combining country of origin and status as non-resident, a table<sup>17</sup> is produced showing the country origin of the non-resident employees by the 4<sup>th</sup> quarter of 2003 and the 4<sup>th</sup> quarter of 2004. This table excludes foreign sailors etc.

Among the most revealing findings are that about 40 per cent have Sweden as its original country. Nordic<sup>18</sup> countries count for almost 60 per cent. Among the other countries none are exceeding 10 per cent of the total. Another important finding is that among the newly adopted EEA-member countries of Central and Eastern Europe, many show a clear rise in their relative share between 2003 and 2004. Poland increases its share from 3 per cent in 2003 to 8 per cent in 2004 and Lithuania from 1 to 3 per cent.

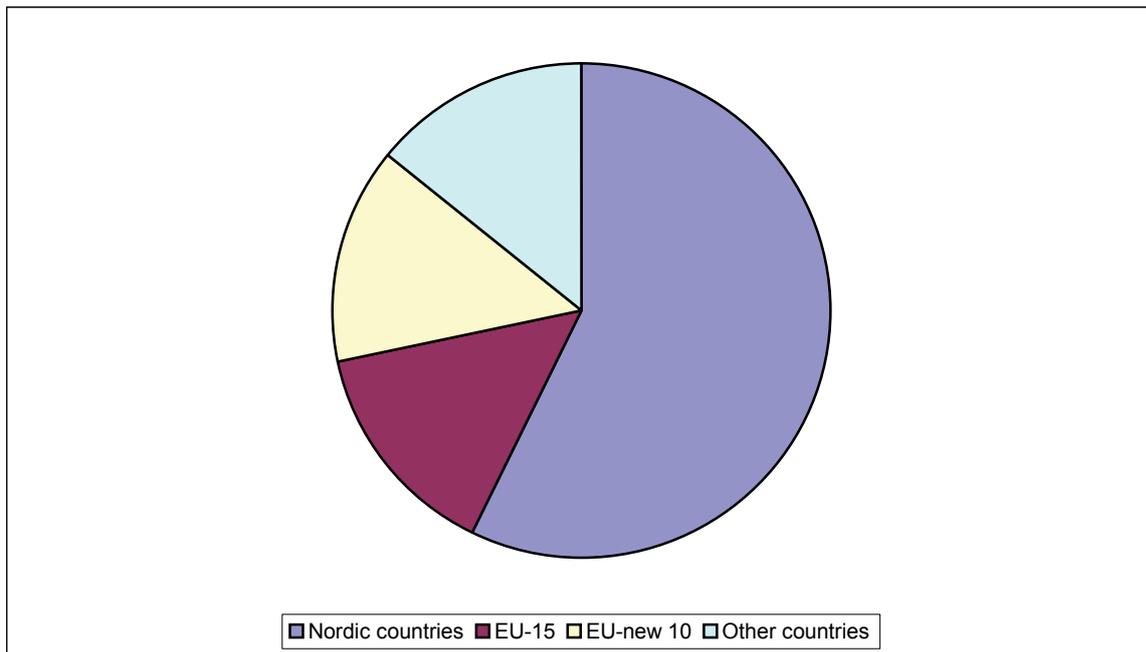
By assuming a constant relationship between number persons and the value of compensation of employees across countries we arrive at a geographical allocation of compensation of employees to abroad. A summary is shown in figure 7. The figure does not take into account the geographical allocation of foreign sailors. To show the total picture the allocation of foreign sailors, based on information on their nationality, must be added.

---

<sup>17</sup> Berge, Næsheim and Østvedt (2006): see table C12, page 52.

<sup>18</sup> Finland, Denmark and Iceland in addition to Sweden (and leaving out Norway of course).

Figure 7. Geographical allocation of compensation of employees to abroad 2004, excluding non-resident sailors etc.



When it comes to geographical allocation of compensation of employees from abroad, we have much less information. We have estimated the wages and salaries from abroad to NOK 2 850 million in 2004. Norway has for years had a rather low unemployment rate compared to most European countries and at the same time relatively high rates of wages and salaries. This leads us to believe that residents of Norway going abroad for work receive rather high wages and salaries, and we assume an average wage of NOK 500 000 per worker. This gives us an estimate on the number of resident persons working for non-resident employers in 2004:

(6)  $\text{NOK } 2\,850 \text{ million} / \text{NOK } 500\,000 \text{ per person} = 5\,600 \text{ persons.}$

A recent Nordic project<sup>19</sup> concludes that about 4 300 persons resident of Norway have work across the Swedish border in 2001. Assuming the same figure is the same for 2004, it implies that 1 300 persons (5 600 - 4 300) work in other countries than Sweden. Among those we assume the following geographical allocation: Denmark 60%, Finland 20%, UK 10% and Germany 10%.

---

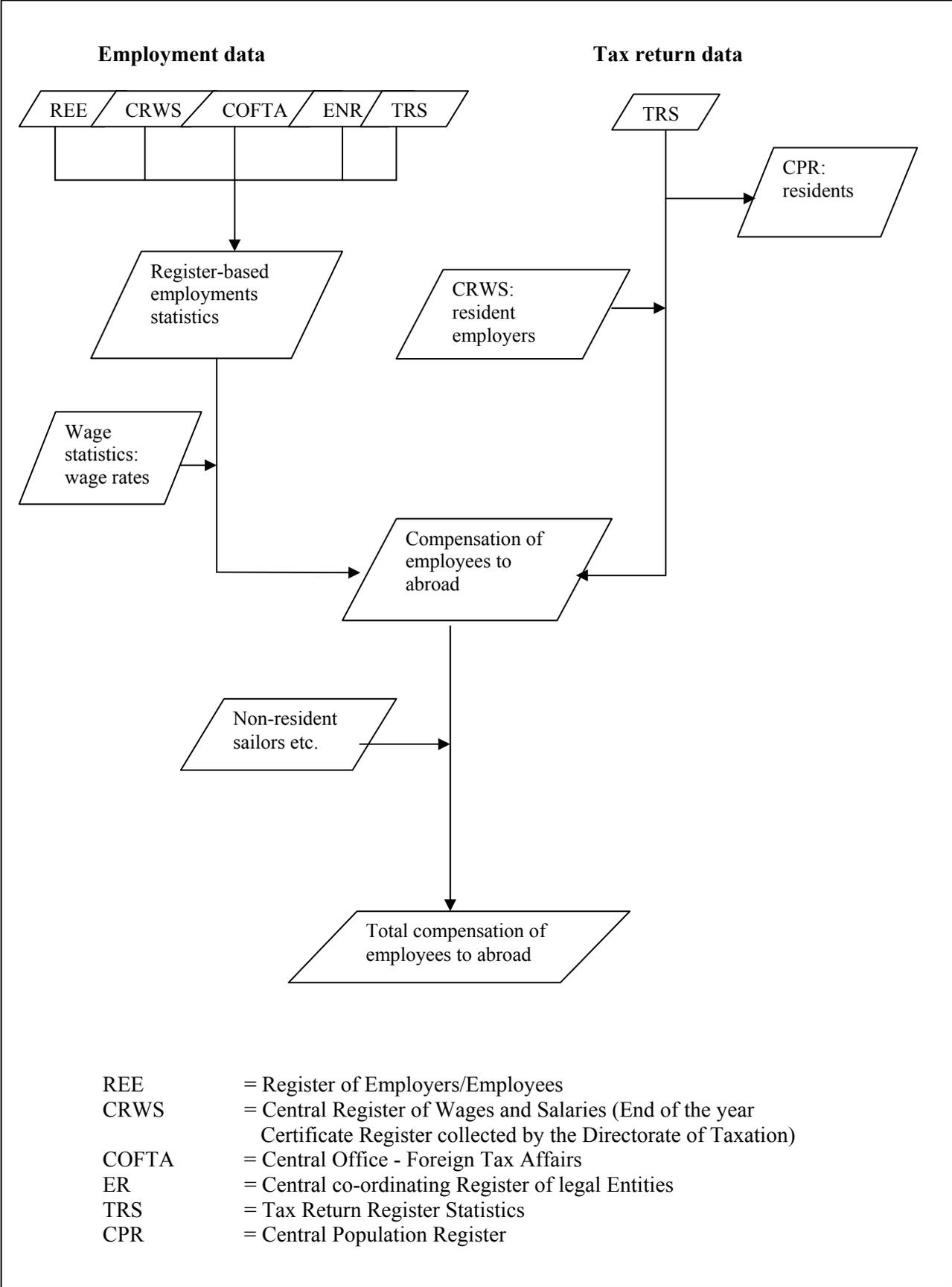
<sup>19</sup> See Statistics Norway (2004).

The geographical allocation of compensation of employees, both debit and credit, should be further tested by conducting mirror analysis with partner countries.

### **8.5 Future current estimations**

Finally, it can be concluded that the information used to estimate the revised figures for 2004 will be available on an annual basis in the future, making it possible to repeat the estimations as part of the joint estimation procedures used in the integrated compilation of the annual NBoP and NNA.

**Annex 1. Flow chart. Estimation of compensation of non-resident employees.**



## **Annex 2. Abbreviations (the abbreviation in Norwegian is given in brackets)**

CRWS (LTO) = Central Register of Wages and Salaries

CEE (BOF) = Central Register of Establishments and Enterprises

LFS (AKU) = Labour Force Survey

TRS (SA) = Tax Return Statistics - Directorate of Taxes' register for Personal Tax Payers

RES = Register based Employments Statistics

CPR = Central Population Register

REE (A/A) = Register of Employers/Employees

COFTA (SFU) = Central Office - Foreign Tax Affairs

ENR (ER) = Central Coordinating register of legal Entities

(WS) = Wage Statistics (wage-rates)

NOSS = National Office for Social Security

### Annex 3. References

- Berge C., Næsheim H.N. and Østvedt B. (2006): *Employed and registered unemployed on short term work stay in Norway (in Norwegian)*. Rapport 2006/4 (Statistics Norway).
- Grini H. (2005): Non-residents in Wage Statistics. Unpublished document. Statistics Norway.
- Halvorsen T. (1993): Ocean water transport in statistics. Selected issues. *Papers and final report. Voorburg Group. Eighth meeting*. Oslo September 1993.
- Halvorsen T. (2002): SAS in National Accounts. Unpublished document. Statistics Norway.
- Commission of the European Communities, International Monetary Fund, Organisation for Economic Co-operation and Development, United Nations, World Bank (1993): *System of National Accounts (SNA-93)*. Brussels/Luxembourg, New York, Paris, Washington D.C.
- EUROSTAT/Commission of the European Communities (1996): *European System of Accounts (ESA 1995)*. Brussels/Luxembourg
- International Monetary Fund (1993): *Balance of Payments Manual, fifth edition (BPM5)*. Washington
- Statistics Norway (2004): *Stronger flow of man-power from Sweden to Norway (in Norwegian)*. [http://www.ssb.no/vis/magasinet/norge\\_verden/art-2004-04-15-01.html](http://www.ssb.no/vis/magasinet/norge_verden/art-2004-04-15-01.html)
- United Nations, European Commission, Monetary Fund, Organisation for Economic Co-operation and Development, United Nations Conference on Trade and Development, World Trade Organisation (2002): *Manual on Statistics of International trade in International Services*, Geneva, Luxembourg, New York, Washington D.C

#### **Annex 4. Contributors and man-hours consumed.**

Those most involved have been:

Name	Department	Hours worked
Tore Halvorsen	National Accounts	170
Christoffer Berge	Labour Market Statistics	20
Gudrun Haraldsdottir	Credit Market Statistics	10
Ingrid Melby	Income and Wage Statistics	10
Grethe Sparby	Income and Wage Statistics	10
Camilla Torp Haugen	Business Register	6
Hours worked in total		226

35 hours were consumed prior to December 1<sup>st</sup> 2005. That means that 191 (226 - 35) hours has been consumed in the period co-financed by Eurostat (December 1<sup>st</sup> 2005 - June 30<sup>th</sup> 2006).

In addition the following has been members of the reference group:

Heidi Bull-Berg, Stein Hansen,

Tor Skoglund and Monica Volden    Division for National Accounts

Helge Nome Næsheim                    Division for Labour Market Statistics

Håkon Grini                                Division for Income & Wage Statistics

Also Kåre Vassenden (Division for Population Statistics) has made some viable contributions through his commenting of the report.

## Recent publications in the series Documents

- 2004/18 T. Karlsen, D. Quang Pham and T. Skjerpen: Seasonal adjustment and smoothing of manufacturing investments series from the quarterly Norwegian national accounts
- 2005/1 V. Skirbekk: The Impact of a Lower School Leaving Age and a Later Retirement on the Financing of the Norwegian Public Pension System.
- 2005/2 H. Utne: The Population and Housing Censushandbook 2001.
- 2005/3 J. L.Hass and R. Straumann: Environmental Protection Expenditure: Methodological work for the Oil and Gas Extraction Industry. Report to Eurostat.
- 2005/4 L. Hobbestad Simpson: National Accounts Supply and Use Tables (SUT) in Constant Prices SNA-NT "SUT/CONSTANT"
- 2005/5 L. Hobbestad Simpson: National Accounts Supply and Use Tables (SUT) in Current Prices. SNA-NT "SUT/STARTER"
- 2005/6 S. Todsen: SNA-NT User's Guide for Supply and Use Tables in Current and Constant Prices.
- 2005/7 E. Ugreninov, T.M. Normann and A. Andersen: Intermediate Quality Report EU-SILC 2003 Statistics Norway.
- 2005/8 H.V. Sæbø: Metadata strategy in Statistics Norway. Eurostat Metadata Working Group Luxembourg, 6-7 June 2005.
- 2005/9 J.L. Hass, K.Ø. Sørensen, K. Erlandsen and T. Smith: Norwegian Economic and Environment Accounts (NOREEA). Project Report 2002.
- 2005/10 A. Benedictow and T. Harding: Modeling Norwegian balances of financial capital.
- 2005/11 A.L. Mathiassen, J.B Musoke, P. Opio and P. Schøning: Energy and Poverty A feasibility study on statistics on access and use of energy in Uganda.
- 2005/12 E. Vinju, R. Strauman, Ø. Skullerud, J. Hass and B. K Frøyen: Statistics on pre-treatment of waste. Pilot study - Norway 2004. Report to Eurostat
- 2005/13 H. Skullerud, Ø. Skullerud and S. Homstvedt: Pilot study: Treatment of Hazardous Waste. Final report to Eurostat.
- 2005/14 H. Skiri, B. Strand, M. Talka and H. Brunborg: Selected Documents on the modernisation of the Civil Registration System in Albania Vol. II.
- 2006/1 O. Andersen og M. Macura: Evaluation of the project "Modernisation of the Civil Registration System in Albania"
- 2006/2 T. Åvistland: The problem with a risk premium in a non-stochastic CGE model.
- 2006/3 Å Cappelén, R. Choudhury and T. Harding: A small macroeconomic model for Malawi.
- 2006/4 J. Ramm og A. Sundvoll: Translating and Testing the European Health Status Module in Norway, 2005.
- 2006/5 A.G. Hustoft og J. Linnerud: Statistical Metadata in Statistics Norway.
- 2006/6 H.V. Sæbø: Systematic Quality Work in Official Statistics - Theory and Practice
- 2006/7 H. Skullerud: Methane emissions from Norwegian landfills Revised calculations for waste landfilled 1945-2004.
- 2006/8 R. Choudhury: User's Guide for a Macroeconomic Model for Malawi.
- 2006/9 J. Dias Loureiro, B. K. Wold and R. Harris: Compendium from Workshop on Light Core Surveys for Policy Monitoring of National PRSPs and MDGs in Maputo, December 2005
- 2006/10 K. Gimming, O.M. Jacobsen and P. Løkkevik: Changes in inventories in the Norwegian National Accounts. Eurostat project report
- 2006/11 B. Bye, T-R. Heggedal, T.Fæhn and B. Strøm: A CGE model of induced technological change: A detailed model description
- 2006/12 S.E. Stave: Water Consumption in Food Processing and the Service Industries in Norway
- 2006/14 T. Harding and H.O. Aa Solheim: Documentation of a model on the household portfolio
- 2006/16 O. Ormanidhi and A. Raknerud: Productivity growth in the Norwegian manufacturing sector 1993 – 2002. A comparison of two methods
- 2007/1 E. J. Fløttum: Differences between SNA93 and ESA95
- 2007/3 T. Skjerpen: Matrix oriented formulae of dynamic multipliers in general autoregressive distributed lag and VARX models
- 2007/4 A. Mathiassen and D. Roll-Hansen: Predicting poverty for Mozambique 2000 to 2005. How robust are the models?