ISSN 1977-0375

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Methodologies and
Working papers

Methodologies used in surveys of road freight transport in member states and candidate countries

2008 edition

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Road freight statistics methodology is described in two documents:

- *"Road freight transport methodology. Reference manual for the implementation of Council Regulation No 1172/98 on statistics on the carriage of goods by road" (Cat. No. KS-RA-07-029-EN-N) presents the relevant legislation and gives detailed methodological advice on the design and implementation of road freight statistics surveys;*

- *"Methodologies used in surveys of road freight transport in member states and candidate countries" summarises the national characteristics of surveys that were carried out in the reporting countries to produce Eurostat's road freight statistics.*

Luxembourg: Office for Official Publications of the European Communities, 2008

ISBN 978-92-79-07847-7
ISSN 1977-0375
Cat. No. KS-RA-08-009-EN-N

Theme: Transport
Collection: Methodologies and working papers

EUROSTAT
L-2920 Luxembourg — Tel. (352) 43 01-1 — website http://ec.europa.eu/eurostat

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INTRODUCTION

The present document contains the methodologies used by member states, candidate and EFTA countries for their surveys on road freight transport statistics.

This document, integrated in the Reference manual for the implementation of Council Regulation No 1172/98 on statistics on the carriage of goods by road, published in the "Methodologies and working papers" collection, provides quite an extensive coverage of what is available on road transport statistics methodology.

It is set out as follows:

Part A describes national methodology for data collection. Information presented there is based on questionnaires completed by the reporting countries. These questionnaires updated the existing information up to the first quarter of 2007.

Part B includes summary tables, with the basic information on sampling, response rate, register quality and precision of results of the surveys.

Data on the register used to draw the sample and the sampling methodology is relevant to the surveys conducted in the first quarter of 2007, while the main figures given for each country refer to the years 2005 and 2006, according to data availability. The total number of statistical units is calculated as the average of the quarterly data, whereas sums are considered for all other annual figures. The results presented in the summary tables have been calculated from the supplementary B tables.

PART A

Methodologies used in surveys of road freight transport in Member States, Candidate and EFTA Countries

BELGIUM

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Parc et Immatriculation des véhicules à moteurs neufs et d'occasion.

Name of organisation who maintains the register:

Ministry of Communication and Infrastructure (DIV/OCR)

Frequency of update: Every month

Frequency of access to draw the samples: Every week

Arrangements for accessing the register: Access to the magnetic tapes of O.C.R.

Information obtained from the register:

Name, address, OCR number, license plate number, registration number, VAT number, load capacity, type of vehicle, type of body, brand and unladen weight.

Procedure for reminders: 2 reminders are sent

SAMPLING METHODOLOGY

Statistical unit: Tractive unit

Types of units excluded:

Agricultural vehicles, military vehicles, public administration and public service vehicles and vehicles not destined to the transport of goods.

Time unit: 1 week

Time units of quarter 1 of 2004 included in the survey: All (13 weeks)

Stratification:

All tractors are surveyed. The sample for lorries is stratified according to 2 criteria: load capacity (14 classes) and type of body (8 classes); this gives 112 strata.

Recording of journey data sent to Eurostat:

Single stop: Tonne-kilometres = Tonnes * km / 2

Multi stop: Tonne-kilometres = Tonnes * km * 2/3

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	123 096	125 726
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	61 581	60 166
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	10 145	9 362
Number of cases classified as non-respondents	12 534	13 303
Number of cases where sample register information was wrong and response could not be used	11 468	11 472
Number of questionnaires used in analysis	27 404	26 005

BULGARIA

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Register of Motor Vehicles

Name of organisation who maintains the register:

The Ministry of Interior

Frequency of update: Quarterly updated

Frequency of access to draw the samples: Once a quarter

Arrangements for accessing the register:

Bilateral inter-institutional agreement between the NSI and the Ministry of Interior for providing statistical information

Information obtained from the register:

Vehicles' registration number, type of vehicle, year of first registration, maximum permissible laden weight, load capacity, number of axes, region, name and the address of the owners

Procedure for reminders:

First reminder: 2 weeks after the end of the surveyed week
Second reminder: 4 weeks after the end of the surveyed week

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Vehicle with maximum permissible laden weight under 6 tonnes, military vehicles, vehicles of the Ministry of Interior and other public administrations, agricultural tractors and other motor vehicles not designed to carry goods, vehicles with weight and dimensions exceeding the normal permitted limits of the country.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

The sample for each quarter of the year is stratified by vehicles' gross weight (6 groups) and country's regions (28 regions), which give 168 strata.

The annual size of the sample for 2007 was provided on the base of sample size, tonnes carried and tonne-kilometres performed for 2006 and is stratified by vehicles' gross weight into 6 groups:

Lorries and special vehicles with gross weight up to 7 499 kg;
Lorries and special vehicles with gross weight from 7 500 kg up to 14 999 kg;
Lorries and special vehicles with gross weight from 15 000 kg up to 16 999 kg;
Lorries and special vehicles with gross weight from 17 000 kg up to 24 999 kg;
Lorries and special vehicles with gross weight above 25 000 kg;
Road tractors.

Each quarter the 6 groups sample is distributed proportionally by the 28 regions of the country.

Recording of journey data sent to Eurostat:

Single stop: Respondents can record only one type of goods, i.e. goods of largest weight. If no type of goods is dominant, the commodity 'Miscellaneous' is recorded.

Multi stop: Multi-stop journey are recorded by vertical stages.

Calculation of weighting factors:

$$\text{Weighting factor} = 13 * \frac{N}{S + S'}$$

N = number of vehicles in the register (in a stratum)
S = number of questionnaires used in analysis (in A1 dataset)
S' = number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

Main figures	**Year 2006**
Total number of relevant goods vehicles in the country	142 833
Number of vehicles selected for initial sample	18 855
Number of questionnaires dispatched to vehicle owners	15 990
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	3 861
Number of cases classified as non-respondents	4 459
Number of cases where sample register information was wrong and response could not be used	7 990
Number of questionnaires used in analysis	2 545

Note: Bulgaria had no obligation to report for years prior its accession in 2007 and started to report data for the reference year 2006.

CZECH REPUBLIC

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Central Register of Vehicles

***Name of organisation who maintains the register*:** Ministry of Transport

***Frequency of update*:** Continuously

***Frequency of access to draw the samples*:** Once a quarter

***Arrangements for accessing the register*:**

Sample of road vehicles is being selected by the administrator of the Central Register of Vehicles following agreed criteria (according to territorial units and weight categories).

***Information obtained from the register*:**

List of vehicles including assigned license plate, holders of vehicle firm, territorial unit (districts), type of body of goods road vehicle, weight category, vehicle type, year of manufacture, fuel used, load capacity, permissible weight and number of axles.

Used in stratification: Load capacity, vehicle type and territorial unit.

***Procedure for reminders*:**

The questionnaire for a given period surveyed is sent one week in advance. The deadline for response is 12 days following the end of the period surveyed and the first reminder is sent 14 days following termination of the mentioned period. If no response is received within next 14 days the second reminder is sent to the vehicles holder.

Response rate was 93.2% for the first quarter of 2007.

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle.

***Types of units excluded*:**

Vehicles with a load capacity less than 2 tonnes, agriculture vehicles, military vehicles and public administration vehicles.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

The sample is stratified according to 4 weight categories and 8 territorial units.

1. Weight categories:
   - 2 – 6 tonnes
   - 6 – 10 tonnes
   - More than 10 tonnes
   - Tractors
2. Territorial units:
   - Prague
   - Central Bohemia

- Southern Bohemia
- Western Bohemia
- Northern Bohemia
- Eastern Bohemia
- South Moravia
- North Moravia

The stratum code consists of 2 numbers. The first is code of weight category, the second is code of territorial unit.

Recording of journey data sent to Eurostat:

Single stop: Respondents can record only one type of goods, i.e. goods of largest weight.

Multi stop: Multi-stop journey are coded by consignments.

Calculation of weighting factors:

Weighting factor = $13 * \frac{N}{S + S'}$

N = number of vehicles in the register (in a stratum)

S = number of questionnaires used in analysis (in A1 dataset)

S'= number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country at mid-point of year	139 009	143 830
Number of vehicles selected for initial sample and questionnaires despatched to vehicle owners	14 585	16 189
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	3 799	4 008
Number of cases classified as non-respondents	923	1 074
Number of cases where sample register information was wrong and response could not be used	2 102	2 406
Number of questionnaires used in analysis	7 761	8 701

DENMARK (National)

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Vehicle Register

Name of organisation who maintains the register: Central Vehicle Register / Statistics Denmark

Frequency of update: Monthly

Frequency of access to draw the samples: Quarterly

Arrangements for accessing the register:

Information obtained from the register:

Name, address, load capacity, maximum permissible laden weight, type of vehicle, type of body, axles, draw hook, registration number, enterprise number

Procedure for reminders:

2 written reminders sent out 1 or 2 weeks respectively after deadline for response

1 telephonic reminder a week later

1 written reminder sent by registered post a week later

Legal proceedings normally ending with a fine of 800 DKK (first time)

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Lorries with maximum permissible laden weight below 6 tonnes.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

The sample is drawn at random within 14 strata. The stratification variables used are:

Type of vehicle (Road tractor /Lorry) by:

- Size of road tractors (3 classes according to gross weight: <=18 tonnes; >18 – 24 tonnes; >24 tonnes)
- Size of lorry with draw hook (3 classes according to gross weight: >15 – 18 tonnes; >18 – 24 tonnes; >24 tonnes)
- Other lorries without draw hook or having a gross weight of >6-15 tonnes (1 class)

The Neyman rule is used for allocation of the sample to strata. The estimated standard deviations on tonnes-kilometres per stratum were used as criterion for the optimization. The sample is equal distributed on the weeks of the quarter.

Recording of journey data sent to Eurostat:

Single stop: We assume that a laden journey of type 1 carries only one type of commodity. If more types of goods are transported and one type of goods is dominating (more than 66%) the dominating one is used for the coding. If no type of goods is dominating the class 24 (miscellaneous) is used.

Multi stop: In the Danish survey on national transport of goods by road laden journeys are either of type 1 (single stop) or of type 3 (collection/delivery).

Collection/delivery: Tonne-kilometres = 0.5 *tonnes loaded * journey length

Calculation of weighting factors:

Weighting factors= $13 * \frac{N}{R}$

N = number of vehicles in the register (in a stratum)

R = number of responses

Main figures (like other tables)	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country at mid-point of year	43 246	44 463
Number of vehicles selected for initial sample and questionnaires despatched to vehicle owners	3 541	3 536
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	1 487	1 469
Number of cases classified as non-respondents	60	69
Number of cases where sample register information was wrong and response could not be used	326	344
Number of questionnaires used in analysis	1 668	1 654

DENMARK (International)

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Register of enterprises having regular international transport of goods by road
- Vehicle Register
- Enterprise Register

Name of organisation who maintains the register: Central Vehicle Register / Statistics Denmark

Frequency of update: Monthly

Frequency of access to draw the samples: Quarterly

Arrangements for accessing the register:

Information obtained from the register:

Name, address, maximum permissible laden weight, load capacity, type of vehicle, type of body, axles, registration number and enterprise number

***Procedure for reminders*:**

2 written reminders sent out 1 or 2 weeks respectively after deadline for response.

1 telephonic reminder a week later

1 written reminder sent by registered post a week later

Legal proceedings normally ending with a fine of 800 DKK (first time)

SAMPLING METHODOLOGY

Statistical unit: Transport firm

Types of units excluded:

No relevant enterprises are excluded but the survey concentrates on transport by road vehicles with a maximum permissible laden weight above 6 tonnes.

Time unit: 1 week for small enterprises and half a week for the other enterprises.

Time units of quarter 1 of 2007 included in the survey: All (13 weeks or 26 halves a week)

Stratification:

The sample is drawn at random within 24 strata. The stratification variables used are:
- Type of transport (2 classes. Own account; Hire or reward)
- Size of enterprise (4 classes: 1-2 vehicles; 3-9 vehicles; 10+ vehicles; unknown=new enterprises)
- Address of vehicle user (4 classes: Copenhagen; Zealand, Funen, etc; Jutland South; Jutland North)

Small enterprises are selected once a year; medium size enterprises are selected twice a year; large enterprises are included in each quarterly sample. The sample is equal distributed on the weeks/half-weeks of the quarter. The reference period is one week for small enterprises and half a week for the other enterprises.

Enterprises are to report international journeys for vehicles that cross the Danish border in a reference period. All journeys are included from departure to arrival back to Denmark.

Recording of journey data sent to Eurostat:

Single stop: We assume that a laden journey of type 1 carries only one type of commodity. If more types of goods are transported and one type of goods is dominant (more than 66%) the dominant one is used for the coding. If no type of goods is dominant the class 24 (miscellaneous) is used.

Multi stop: For multi stop journeys each transport operation is reported. The journey data are derived from the goods data. Multi-stop journey are coded by consignments.

Collection/delivery: Journeys of type 3 (collection/delivery) are not accepted in the Danish survey of international transport. Such – rare - journeys are reported as multi stop journeys or as an artificial single stop journey.

Calculation of weighting factors:

Weighting factor = $13 * C * \frac{N}{R}$

or $26 * C * \frac{N}{R}$ **depending on stratum**

N = number of vehicles in the register (in a stratum)
R = number of responses
C = correction factor

The correction is due to underreporting. The correction factor is computed as the ratio between the estimated kilometres in international traffic obtained from the survey of national road goods transport (a supplementary question for vehicles in international traffic), and the estimated kilometres from the survey of international road goods transport.

Main figures	**Year 2005**	**Year 2006**
Number of enterprises in international traffic	1 151	1 086
Number of enterprises in sample (some enterprises are sampled more than once a year)	2 412	2 351
Number of cases classified as non-respondents	56	102
Number of enterprises providing information about vehicles	2 356	2 249
Number of vehicle for which information was supplied on journeys made in survey period.	1 904	2 042

GERMANY

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Zentrales Fahrzeugregister (ZFZR)

Name of organisation who maintains the register: Kraftfahrt-Bundesamt (KBA)

Frequency of update: Continuous

Frequency of access to draw the samples: Every 4 weeks

Arrangements for accessing the register:

The register is accessed in a unit which is totally distinct from the statistical domain. The establishment of the sample from the Register is undertaken according to the sample and stratification plan, the principles of which are established with the Federal Statistical Office.

Information obtained from the register:

Information for stratification: Type of vehicle and body type, owner group, region of registration, maximum permissible laden weight and load capacity.

Information to conduct the survey: License plate number, name and address of the vehicle owner, maximum permissible laden weight, load capacity, type of vehicle and body type and owner group.

Information to relieve the burden of respondents: Date of first registration of the vehicle, maximum permissible laden weight, load capacity, engine power, number of axles, type of vehicle and body type, region of registration (Bundesland), owner group and exhaust emissions class.

Procedure for reminders:

A reminder is sent 23 days after the date the questionnaire is due to be returned.

A penalty procedure starts 23 days after the reminder, if the questionnaire is still not received.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Lorries < 3.501 tonnes load capacity, military vehicles, vehicles of public administrations and agricultural tractors.

Time unit: Half a week.

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

There are 315 classes. The stratification is hierarchical, according to 4 levels (number of categories in brackets):

1st level: type of vehicle (2)
2nd level: body type of lorry (4) and/or type of operator (2)
3rd level: region of registration of lorry with normal body type or road tractor (27)
4th level: lorry – load capacity (1-4)
road tractor – maximum permissible laden weight (1-4)

The differentiation on level 1 and 2 is as follows:

Type of vehicle: lorry
road tractor

Lorry: lorries with special body type by type
- tanker lorries for inflammable liquids
- lorries designed for the transport of swap-bodies and containers
- others with special body type

lorries with normal body type by type of operator:
- transport and communications
- others

Road tractor: road tractors by type of operator:
- transport and communications
- others

Recording of journey data sent to Eurostat:

Single stop: If on a type 1 journey (single stop) several different types of goods are transported, the type of goods with the uppermost weight is reported in data set A3. In detail data is reported as follows:

A3:	8-A3.1	Type of goods with the uppermost weight (in case of different types)
	9 – A3.2	Weight of goods transported on the journey
	10 – A3.3	Classification of the first dangerous good quoted in the questionnaire (up to five types can be listed; it is assumed, that the first is the main one)
	11 – A3.4	Type of cargo of the load transported on the journey
	12 – A3.5	Point of loading (begin of journey)
	13 – A3.6	Point of unloading (end of journey)
	14 – A3.7	Distance travelled on the journey
A2:	12 – A2.2	= A3.2
	13 – A2.3	= A3.5
	14 – A2.4	= A3.6
	15 – A2.5	= A3.7
	16 – A2.6	= A3.2 * A3.7

Multi stop: Multi-stop journey are coded by vertical stages. In case several different types of goods are transported, the type of goods with the uppermost weight at a time is reported. In detail data is reported as follows:

A3:	8 – A3.1	Type of goods with the uppermost weight (in case of different types)
	9 – A3.2	Weight of goods transported between two successive stops (points)
	10 – A3.3	Classification of the first dangerous good quoted in the questionnaire

(up to five types can be listed; it is assumed, that the first is the main one)

11 – A3.4 Type of cargo of the load transported between two successive stops (points)

12 – A3.5 First point of loading respectively stop during the journey

13 – A3.6 Last point of unloading respectively stop during the journey

14 – A3.7 Distance travelled between two successive stops (points)

A2: 12 – A2.2 (Sum of (A3.2 * A3.7)) / (sum of A3.7)

13 – A2.3 First point of loading (= A3.5 if GoodsN = 1)

14 – A2.4 Last point of unloading (= A3.6 if GoodsN = max)

15 – A2.5 Sum of A3.7

16 – A2.6 Sum of (A3.2 * A3.7)

Collection/delivery: These are journeys up to 30 km distance and several points of loading and/or unloading. With the aim to reduce the burden of statistics the respondent is not asked for details of all the stops but the number of stops. In detail data is reported as follows

A3: 8 – A3.1 Type of goods of the first quoted good in the questionnaire (in case of different goods quoted; it is assumed, that the first is the main one)

9 – A3.2 Weight of goods transported on the journey

10 – A3.3 Classification of the first dangerous good quoted in the questionnaire (up to five types can be listed; it is assumed, that the first is the main one)

11 – A3.4 Type of cargo of the load transported on the journey

12 – A3.5 First point of loading (begin of journey)

13 – A3.6 Last point of unloading (end of journey)

14 – A3.7 Distance travelled on the journey

A2 12 – A2.2 = A3.2

13 – A2.3 = A3.5

14 – A2.4 = A3.6

15 – A2.5 = A3.7

16 – A2.6 = A3.2 * A3.7

Other variables: In case of journeys where the vehicle operates as a shuttle between one point of loading and one point of unloading the single journeys are reported as laden journeys (journey type 1) or empty journeys (journey type 4). See also above.

Calculation of weighting factors:

The calculation of the extrapolation factor is done on a monthly basis (not quarterly) in two steps. At first each series is extrapolated considering missing answers in stratum using multiplicative completion. In a second step a monthly and stratum adaptation to the current stock data is done.

Since the survey period may cover two different months the vehicle day is the unit for the adaptation instead of the survey period. The extrapolation factor for the tour of a vehicle, that belongs to a stratum *h*, drawn in serie *i*, which made the tours in months *j* is as follows:

$$\frac{M_{hj}}{\hat{M}_{hj}} \cdot \frac{8N_{hi}}{n_{hi} - n_{hi,a}}$$

N_{hi} Number of vehicles in stratum *h* at the time of the drawing of the series i

n_{hi} Number of selected vehicles in stratum *h* of series *i*

$n_{hi,a}$ Number of real missing answers of vehicles in stratum *h*, which were selected in series *i* (No feed back, non-response, questionnaire undeliverable, identification of user not possible).

M_{hj} Number of vehicles in stratum *h* in month *j* of the population.

$\hat{M}_{hj}$ Number of vehicles in stratum *h* in month *j* extrapolated from the sample

M_{hj} should be correctly identified using a daily count of each stratum of the register and in adding in each stratum the results of all days in the month. For practical reasons a good approximation is made multiplying the stock made up of stratum on the 15th of each month with the length of the month in days (i.e. 28, 29, 30 or 31). The method of extrapolation with the monthly adaptation to the actual stock of vehicles allows to include estimates for the registration of new vehicles between the date of the sample drawing and the reference period. Missing answers are also estimated. Under the assumption that missing answers in each stratum occur at random the additional estimation of missing answers does not cause any bias.

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	440 363	453 244
Number of statistical units selected for initial sample and questionnaires dispatched to vehicle owners	204 873	203 650
Number of cases where no unit activity was recorded during the sampled period	36 592	36 255
Number of statistical units classified as non-respondents	8 578	8 967
Number of cases where sample register information was wrong and response could not be used	11 266	9 801
Number of questionnaires used in analysis	148 437	148 627

ESTONIA

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Vehicle Register

***Name of organisation who maintains the register*:**

Estonian National Motor Vehicle Registration Centre

***Frequency of update*:** Continuously

***Frequency of access to draw the samples*:** Once a quarter

***Arrangements for accessing the register*:**

The order of the Ministry of Economic Affairs and Communications by which the Vehicle Register is obliged to give the data to the Statistical Office of Estonia

Information obtained from the register:

Registration number of vehicle, register code of enterprise or natural person, name, address, telephone number and e-mail address of the vehicle user or owner, maximum permissible laden weight, load capacity, number of axles of lorry or tractor, maximum gross weight of trailer, maximum load capacity of trailer, body type of lorry, type of fuel

Used in stratification: Type of vehicle and body type, region of registration, maximum load capacity, year of manufacture

Main activities (NACE Rev.1.1) of enterprise/organisation using the vehicle is obtained from Business Register

***Procedure for reminders*:**

Statistics Estonia has a standard routine for reminders:
First reminder: 2 weeks after the surveyed week, letter by post
Second reminder: 4 weeks after the surveyed week, letter by post
Third reminder: 5 weeks after the surveyed week, contacting the vehicle users by mobile phone.

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:**

Lorries <3.501 tonnes load capacity, military vehicles, vehicles of public administrations and public services, agricultural tractors, vehicles with age of vehicle over 25 year, special purpose vehicles such as truck cranes, fire-engine vehicles, road maintenance vehicles and other special purpose vehicles

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

***Stratification*:**

The sample for survey on transportation of goods by road is selected using stratified simple random sampling. Sample is stratified according to region (Capital and its surrounding county and other Estonia) and load capacity of vehicle. Sample is allocated using Neyman

allocation according to variables tonnes and tonne-kilometres. The weekly sample size is 112 vehicles:

Indicators of stratification in 2006 and in Q1 2007 are:

Region: TA – Harju county, EE – other regions.

Type of vehicle and load capacity: Road tractors, load capacity >3.5 <5 t, load capacity 5<10 t, load capacity 10 t and more.

Strata:

TA1 - Road tractors
TA2 – Vehicles with the load capacity >3.5 <5 t
TA3 - Vehicles with the load capacity 5<10 t
TA4 - Vehicles with the load capacity 10 t and more
EE1 - Road tractors
EE2 – Vehicles with the load capacity >3.5 <5 t
EE3 - Vehicles with the load capacity 5<10 t
EE4 - Vehicles with the load capacity 10 t and more

Recording of journey data sent to Eurostat:

Single stop: If more than one goods commodity is carried, it is coded as "mixed goods" type 24. If mixed goods are selected, then goods loading type is set according to good with highest weight (kilograms)

Multi stop: Same as for single stop. Multi-stop journey are recorded by vertical stages.

Collection/delivery: Same as for single stop.

Other variables: We assume that within one journey only one commodity is carried.

Calculation of weighting factors:

$$\text{Weighting factors} = 13 * \frac{N}{S + S'}$$

N = number of vehicles in the register (in a stratum)

S = number of questionnaires used in analysis (in A1 dataset)

S' = number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	17 714	19 749
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	5 720	4 152
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	1 490	1 620
Number of cases classified as non-respondents	1 513	1 364
Number of cases where sample register information was wrong and response could not be used	1 505	1 468
Number of questionnaires used in analysis	1 212	1 370

IRELAND

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: *QA08_NVDF_2.REG*

Name of organisation who maintains the register: Central Statistics Office

Frequency of update: Every 8 weeks

Frequency of access to draw the samples: Every 4 weeks

Arrangements for accessing the register:

Every 8 weeks the CSO receives a file from the Department of the Environment Heritage and Local Government (DOEHLG), Vehicle Registration Unit. This file contains details of every vehicle taxed as a goods vehicle in the state. This file is used to update the CSO register of goods vehicles. The CSO register contains only vehicles of unladen weight 2000 kg or over. Newly licensed vehicles from the DOEHLG file that are not on the CSO register are added to the CSO register. Vehicles on the CSO register that are not on the DOEHLG file are deleted from the CSO register. At this time also, vehicles on the CSO register on which the tax has expired more than 3 years ago are also deleted from the CSO register.

Information obtained from the register:

The data obtained from the register are as follows:

- Year and month when the tax on the vehicle expires
- Motor taxation office in which the vehicle was taxed
- Unladen weight of the vehicle
- Registration number of the vehicle
- SIMI code of the vehicle
- Year of manufacture of the vehicle
- Trailer code (to show if the vehicle is used with a trailer)
- License code (to show if the vehicle is licensed for carriage of owner's goods only or for hire or reward)
- Fuel type of vehicle
- Body type of vehicle
- Name and address of owner of vehicle
- Date of first registration of vehicle

Two new variables are created when updating CSO register:

- Age – calculated from the year of manufacture of the vehicle (there are 3 age categories)
- Size – calculated from the unladen weight of the vehicle (there are 3 size categories)

There are 9 sample selection strata based on the 9 different combinations of the age and size categories.

***Procedure for reminders*:**

A register of forms issued is kept. When a form is returned it is receipted and a receipt code is entered on the register of forms issued. There is a standard system for reminders. For forms, which have not been returned, reminders are issued 10 days and 20 days after the end of the survey week. When it is time to do reminders for a certain week, a program is run to check the issue register of forms to see which ones have been receipted. For any forms that have not been receipted, a reminder is generated and posted out to the respondent. The same procedure is used for both first and second reminders.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Goods vehicles with an unladen weight of less than 2000 kg are excluded from the survey

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

The following table shows the basis of the stratification used. It shows the 20 strata number codes that are used for grossing. It also shows the 9 stratum number codes that are used for sample selection. Different sampling rates are applied to the different sample selection strata. 15% of vehicles in selection strata 1, 4 and 7 are sampled, 50% of vehicles in selection strata 2, 5 and 8 are sampled and 90% of vehicles in strata 3, 6 and 9 are sampled. Any vehicle should be sampled only once in any one survey year, for this reason vehicles already sampled in a survey year are eliminated from the selection process.

Vehicle Characteristics				Stratum Number	
Year of Manufacture	Unladen Weight	Taxation Use[1]	Year of First Registration	Grossing Up	Sample Selection
Before 1999	2-5 tonnes	Immaterial	Immaterial	1	1
"	5-10 tonnes	Own Account	"	2	2
"	"	Hire or Reward	"	3	
"	10 tonnes or over	Own Account	"	4	3
"	"	Hire or Reward	"	5	
1999 to 2003	2-5 tonnes	Immaterial	"	6	4
"	5-10 tonnes	Own Account	"	7	5
"	"	Hire or Reward	"	8	
"	10 tonnes or over	Own Account	"	9	6
"	"	Hire or Reward	"	10	
2004 or later	2-5 tonnes	Immaterial	Before 2006	11	7
"	"	"	2006 or later	12	
"	5-10 tonnes	Own Account	Before 2006	13	
"	"	"	2006 or later	14	8
"	"	Hire or Reward	Before 2006	15	
"	"	"	2006 or later	16	
"	10 tonnes or over	Own Account	Before 2006	17	
"	"	"	2006 or later	18	9
"	"	Hire or Reward	Before 2006	19	
"	"	"	2006 or later	20	

[1] This is the use (viz. **carriage for hire or reward** or **own account carriage**) stated by the reporter when taxing the vehicle.

Recording of journey data sent to Eurostat:

Single stop: The data entry system can only take one goods type code so if there is more than one type of goods carried on the journey then the commodity will have to be recorded as a mixed load.

Multi stop: Multi-stop journeys are coded by consignments. The data entry system can only take one origin and destination for a journey. The origin and destination, number of collection stops and weight of goods collected and number of delivery stops and weight of goods delivered are recorded. There is no facility to enter tonne-kilometres on the data entry system so tonne-kilometres are calculated using formulas.

Collection/delivery: The data entry system can only take one origin and destination for a journey. The origin and destination, number of collection stops and weight of goods collected and number of delivery stops and weight of goods delivered are recorded. There is no facility to enter tonne-kilometres on the data entry system so tonne-kilometres are calculated using formulas.

Calculation of weighting factors:

$$\text{Weighting factors} = 13 * \frac{N}{S + S'}$$

N = average number of vehicles on register in stratum for quarter (sum of number of vehicles on register in a stratum at the beginning and the end of a quarter divided by 2

S = number of questionnaires used in analysis (in A1 dataset)

S' = number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	94 876	105 885
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	27 401	31 299
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	3 926	4 832
Number of cases classified as non-respondents	13 004	14 323
Number of cases where sample register information was wrong and response could not be used	3 368	4 247
Number of questionnaires used in analysis	7 103	7 897

GREECE

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Vehicle Register

Name of organisation who maintains the register: Ministry of Transport & Communications

Frequency of update: Continuous

Frequency of access to draw the samples: Once a year.

Arrangements for accessing the register:

Once in a year, according to the stratification plan of the sample, a copy of the circulating goods road motor vehicles on 31st December is obtained from the Ministry of Transport & Communications.

Information obtained from the register:

Name, address, use of vehicle, maximum permissible laden weight, load capacity, type of vehicle, type of body, axles, year of national registration and registration number.

For international transport the Transport Statistics Unit of NSSG maintains a register with enterprises performing international transport of goods and their vehicles. The vehicles that perform international transport of goods included in the sample are obtained from this register

Used in stratification: type of use of the vehicle, address (Nuts 1 level), load capacity and type of body.

***Procedure for reminders*:**

The survey is conducted through interviewers who are entrusted with the task to contact the vehicle owner until the end of the survey's collection phase.

Concerning the response rate of the survey, in all quarters of 2006 this was above 70%. We consider that such percentages are adequate for the purposes of the survey.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Vehicles with road capacity less than 3.5 tonnes and less than 6 tonnes of maximum permissible weight, military vehicles, vehicles of public administration and agricultural tractors.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: 13 weeks.

Stratification:

Following, information concerning stratification variables and codes used is provided.

Firstly the vehicles are discriminated between:
1. Those that conduct national journeys
2. Those that conduct international journeys

For vehicles conducting national journeys, the strata are defined by:

1. The geographical division (NUTS 1)

NUTS 1 areas in Greece	
1	VOREIA ELLADA (North Greece)
2	KENTRIKI ELLADA (Central Greece)
3	ATTIKI (Attica)
4	NISIA AIGAIOU, KRITI (Aegean Islands and Crete)

2. The use of the vehicle, as presented in the following table (in Greece a vehicle can have a permission for private or public use):

Code	Use of the Vehicle
1	Hire or Reward (Public use)
2	On Own Account (Private use)

3. The type of the vehicle, as presented in the following table

Trucks Type	
1	Lorries with load capacity 3.5-7.9 tonnes
2	Lorries with load capacity 8-12.9 tonnes
3	Lorries with load capacity greater than 13 tonnes
4	Tank-trucks and lorries with specific "body"
5	Tractors

For vehicles conducting international journeys, the strata are also defined by the geographical division (NUTS 1). Note that for those vehicles, the type of the truck is coded as 6.

Recording of journey data sent to Eurostat:

Single stop: Respondents can record only one type of goods, *i.e.* goods of largest weight. If no type of goods is dominant then ‘miscellaneous’ is used.

Multi stop: Multi-stop journeys are coded by consignments.

Collection/delivery: For short distance journeys of type 3 (collection/delivery) with more than five points of loading and/or unloading, the respondent is not asked for the details of all the stops, but is asked about the number of stops, the distance travelled loaded and the distance travelled unloaded, the total weight transported and the main type of good (as in type 1).

Calculation of weighting factors:

$$\text{Weighting factors} = 13 * \frac{N}{S + S'}$$

N = number of vehicles in the register (in a stratum)

S = number of questionnaires used in analysis (in A1 dataset)

S' = number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	81 766	79 869
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	6 816	6 696
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	673	504
Number of cases classified as non-respondents	1 246	1 420
Number of cases where sample register information was wrong and response could not be used	839	714
Number of questionnaires used in analysis	4 058	4 058

SPAIN

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Registro de Ordenación del Transporte Terrestre

Name of organisation who maintains the register: Ministry of Transport

***Frequency of update*:** Continuously

Frequency of access to draw the samples: Once a month.

Arrangements for accessing the register: The register belongs to the Ministry

Information obtained from the register:

Name, registration number, address, type of vehicle, type of transport (own account or hire or reward), range of authorisation of action of the vehicle (local, national, international), year of registration, load capacity and maximum permissible weight.

Used in stratification: Type of transport, range of authorisation of action of the vehicle, load capacity and type of vehicle.

Procedure for reminders:

During the week of reference and the following four weeks, daily phone calls are made. During this period, if the company is not found, new addresses and telephone numbers of the companies are looked for.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

'Light' transport vehicles: less than 3.5 tonnes weight capacity and less than 6 tonnes of maximum permissible weight
Special vehicles with very high weight capacity or dimensions, which need a special registration number.
Military vehicles and those belonging to Public Administrations.
Vehicles whose use is not for transport of goods: excavators, rollers, etc.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

There are 12 strata (in proportion to the frame):

Type of transport:
- 1: own account
- 2: hire or reward

Range of authorisation:
- 1: national range
- 2: other more reduced range of action

Type of vehicle and weight capacity:
- 1: lorries of 3.6 to 10 tonnes
- 2: lorries of 10.1 to 18 tonnes
- 3: lorries of over 18 tonnes
- 4: tractors

Code	Type of transport	Range of authorisation	Type of vehicle and weight capacity
1	Hire or reward	National	3.5 – 10 tonnes
2	Hire or reward	National	10.1 – 18 tonnes
3	Hire or reward	National	+ 18 tonnes
4	Hire or reward	National	Tractors
5	Own account	All	3.5 – 10 tonnes
6	Own account	All	10.1 – 18 tonnes
7	Own account	All	+ 18 tonnes
8	Own account	All	Tractors
9	Hire or reward	Other	3.5 – 10 tonnes
10	Hire or reward	Other	10.1 – 18 tonnes
11	Hire or reward	Other	+ 18 tonnes
12	Hire or reward	Other	Tractors

Recording of journey data sent to Eurostat:

Multi stop: Multi-stop journeys are coded as consignments.

Collection/delivery: Without points of loading and/or unloading of the goods,
Tonne-kilometres = maximum tonnes * kilometres / 2.
Only the main type of goods is requested (but all tonnes).

Calculation of weighting factors:

On a monthly basis,

Weighting factors = $C * T * \frac{N}{S + S'} = \left(T - L/1000\right) * \frac{N}{S + S'}$

N = number of vehicles in the register (in a stratum)

S = number of questionnaires used in analysis (in A1 dataset)
S' = number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

C =a correction factor computed as $1 - \frac{L}{T * 1000}$

T = number of week in the month
L = number of vehicles in loss in the month

Main figures	Year 2005	Year 2006
Total number of relevant goods vehicles in the country	361 157	379 564
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	52 000	52 000
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	8 343	8 058
Number of cases classified as non-respondents	3 949	2 834
Number of cases where sample register information was wrong and response could not be used	10 347	11 761
Number of questionnaires used in analysis	29 361	29 348

FRANCE

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Fichier Central des Automobiles

Name of organisation who maintains the register:

Ministère des Transports, de l'Equipement, du Tourisme et de la Mer

Frequency of update: The register is updated daily, but a quarterly update is used for the survey

Frequency of access to draw the samples: Quarterly

Arrangements for accessing the register:

Since July 2001, the Ministry is in charge of drawing the sample, on a quarterly basis, from a copy of the 'Fichier Central des Automobiles'.

Information obtained from the register:

Name and address of the owner, SIREN number of the register of enterprises, type of vehicle, load capacity, maximum permissible weight, type of body, year of registration, main activity of the enterprise, belonging of the enterprise to the register of transporters for hire and reward and administrative region (code NUTS2).

Used in stratification: Type of vehicle, load capacity, maximum permissible weight, type of body, year of registration, main activity of the enterprise, belonging of the enterprise to the register of transporters for hire and reward and administrative region (code NUTS2).

Procedure for reminders:

First reminder: 4 weeks after the surveyed week
Second reminder: 7 weeks after the surveyed week, with a new copy of the questionnaire sent out
Non-response report: 12 weeks after the surveyed week
Contentious: every year in February, addressed to enterprises with over ten questionnaires not answered in the previous year

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Motor vehicles more than 15 years old.
Lorries exceeding 32.5 tonnes of load capacity (44.5 tonnes for road tractors).
Vehicles with less than 3.5 tonnes of gross vehicle weight.
Special purpose road vehicles such as garbage trucks, fire brigade vehicles, ambulances, cranes, as well as military vehicles and vehicles belonging to owners involved in activities such as driving schools, fairgrounds, etc.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

Since July 2001, sampling is carried out according to the method of 'unequal probabilities'. This leads to a large extent of stratification, and the resulting data are thus difficult to define and describe.

The variables used for stratification are: technical details relating to the vehicle, such as category (lorry or road tractor), load capacity, maximum permissible laden weight, year of registration, main activity of the enterprise to which the vehicle belongs, membership of the enterprise to the register of transporters for hire and reward, administrative region (code NUTS2) and type of body of the vehicle.

The sample is rotated on two years: half of the sample is renewed on the following year. Therefore, every vehicle is sampled twice: the sampling week allocated to it, and the same week the following year.

Recording journey data sent to Eurostat:

Multi stop: Multi-stop journeys are coded as consignments

Collection/delivery: In the recording of type 3, we describe one basic transport operation with the total weight of goods (A3.2 in table A3) and the total length of the journey (A3.7 in table A3). To calculate the number of tonne-kilometres, we multiply the total weight of goods by the total length of the journey and divide the result by 2, which gives the same result as if the vehicle had been unloading uniformly throughout the journey.

Calculation of weighting factors:

Weighting factors for each vehicle k, $w_k = \frac{1}{\pi_k} = \frac{1}{n} \cdot \frac{\sum_k c_k u_k v_k}{c_k u_k v_k} = \frac{N}{n} \cdot \frac{\frac{\sum_k c_k u_k v_k}{N}}{c_k u_k v_k}$

u_k = 1 for vehicles > 15 years, 2 for vehicles from 11 to15 years, 3 for vehicles from 6 to 10 years, 6 for vehicles from 0 to 5 years

c_k = 0,5 x MPLW / 10 for lorries
= (MPLW - 6) * 0,88 / 10 for road tractors

v_k = 1 by default, 1.5 for vehicles belonging to transport enterprises, 2 for removal vehicles, vehicles carrying dangerous goods or belonging to international transport enterprises.

N is total population and *n* the size of the sample.

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	597 524	594 621
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	69 786	91 940
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	9 630	11 551
Number of cases classified as non-respondents	12 556	17 196
Number of cases where sample register information was wrong and response could not be used	15 685	21 801
Number of questionnaires used in analysis	31 915	41 392

ITALY

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: 1. National Vehicle register.
2. Tax Vehicle register.

Name of organisation who maintains the register: 1. Ministry of Transport.
2. Ministry of Economy and Finance.

Frequency of update: Monthly

Frequency of access to draw the samples: Once a year

Arrangements for accessing the register:

The owner of the register draws the sample for the road transport statistics survey manager according to the stratification designed for the survey. The road transport manager provides to the owner of the national vehicle register:

- Sampling frame specifically designed to cover the population adequately and completely
- List of the variables
- Operational flow chart showing all steps of the extraction process

Information obtained from the register:

The two databases extracted from the registers are submitted to the following actions:

- Structure analysis
- Cleaning program

Then a special procedure creates a record layout for each license plate: technical data are extracted from the national vehicle register and data on the enterprise are extracted from tax vehicle register.

The national vehicle register provides **data on the vehicle**:
License-plate, place in which the vehicle has been registered, load capacity, maximum permissible weight, number of axles, year of first registration, type of transport (for hire or reward or on own account).

The Tax Vehicle register provides **data on the enterprise**:
Name of the operator of vehicle, address of the operator (zip code – town - street- number), type of company, vat number, flag leasing.

The variables used in the stratification of the sample are:

- Type of transport: hire or reward or own account
- Load capacity of the vehicles:
- Region and province in which the vehicle has been registered (24)

Procedure for reminders: Studies for implementing standard routine of reminders are under way.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Agricultural vehicles, military vehicles and vehicles belonging to central or local public administrations.
All road transport vehicles with a load capacity < 3.5 tonnes.
All road transport vehicles more than 11 years old (from first registration).

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

The overall sample size is 65000 vehicles. All road good transport vehicles are distributed in 240 strata. Road goods transport vehicles are distributed according to a stratified sampling plan (the vehicles more than 11 years old have been excluded):

a. Place of first registration (region – R or province -P)

R010	PIEMONTE
R020	VALLE D'AOSTA
R030	LOMBARDIA
P021	BOLZANO - BOZEN (province)
P022	TRENTO (province)
R050	VENETO
R060	FRIULI VENEZIA GIULIA
R070	LIGURIA
R080	EMILIA ROMAGNA
R090	TOSCANA
R100	UMBRIA
P041	PESARO (province)
P042	ANCONA (province)
P043	MACERATA (province)
P044	ASCOLI PICENO (province)
R120	LAZIO
R130	ABRUZZO
R140	MOLISE
R150	CAMPANIA
R160	PUGLIA
R170	BASILICATA
R180	CALABRIA
R190	SICILIA
R200	SARDEGNA

b. Type of transport

- Hire or reward = T
- Own account = P

c. Load capacity of the vehicles

- From 3.5 to 4.9 tonnes= 1
- From 5 to 9.9 tonnes = 2
- From 10 to 12.4 = 3
- From 12.5 to 14.9 = 4
- More than 14.9 = 5

Recording journey data sent to Eurostat:

Single stop: When in a laden journey several types of goods are transported we ask the hauliers to describe up to three types of goods. Transport operators are required to fill in as many lines of the questionnaire as different commodity groups (at most three) are transported.

Multi stop: Information on basic freight transport operations by road is collected on the basis of a vehicle model questionnaire so for each journey each transport operation is recorded. For multi-stop (type2) journeys the survey information system creates the goods dataset in which each transport operation is reported; total weight carried (A2) is derived from the goods dataset (A3). The A3 records are coded as consignments reporting distance between the place of loading and unloading of goods.

Collection/delivery: With the aim to reduce the burden of statistics, the respondent is not asked for details of all the stops but the number of stops; for the collection of data a simplified scheme is applied:

Total loaded distance travelled;

Total weight of goods collected/ delivered

First point of loading (begin of journey)

Last point of unloading (end of journey)

Tonne-kilometres = 0.5 *tonnes loaded * journey length

In case of journeys where the vehicle operates as a shuttle between one point of loading and one point of unloading the single journeys are reported as laden journeys (journey type 1)

Other variables: For dataset A1 "the vehicle related variables" are connected to the configuration at the beginning of the first laden journey made during the survey week.

Calculation of weighting factors:

$$\text{Weighting factors} = 13 * \frac{N}{S + S'}$$

N = number of vehicles in the register (in a stratum)

S = number of questionnaires used in analysis (in A1 dataset)

S' = number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

Main figures	**Year 2004**
Total number of relevant goods vehicles in the country	258 038
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	80 049
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	4 376
Number of cases classified as non-respondents	43 947
Number of cases where sample register information was wrong and response could not be used	8 584
Number of questionnaires used in analysis	23 142

CYPRUS (National)

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Road Vehicle Register

***Name of organisation who maintains the register*:** Road Transport Department

***Frequency of update*:** Yearly

***Frequency of access to draw the samples*:** Quarterly

***Arrangements for accessing the register*:**

Very good co-operation of the Statistical service with the Road Transport Department

***Information obtained from the register*:**

Category of vehicle (Hire or Reward and Own account), gross vehicle weight and load capacity of the vehicle.

***Procedure for reminders*:**

Post and follow-up conduct the survey basically by personal visits for non-responses. The response rate is considered as adequate and reaches 95% of the sample.

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:**

Vehicles with load capacity less than 3 tonnes

Time unit: 1 Week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

***Stratification*:**

A total of 1612 vehicles (lorries and road tractors) are surveyed. The sample is distributed in all weeks (31 vehicles per week). The survey started in January 2002

The sample consists of 9 categories (stratum) according to the load capacity of the vehicle and the type of transport (Hire or reward and own account)

Recording of journey data sent to Eurostat:

Single stop: Only the commodity with the highest weight is taken into account.

Multi stop: For the calculation of tonnes* km the sum of weight received plus the weight delivered multiplied by the distance covered is divided by 1500.

Collection/delivery: For the calculation of tonnes* km the sum of weight received plus the weight delivered multiplied by the distance covered is divided by 2000.

Calculation of weighting factors:

Weighting factor= $13 * \frac{N}{Q}$

N = number of vehicles in the register (in a stratum)

Q = number of questionnaire completed

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	10 940	11 569
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	1 612	1 612
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	412	431
Number of cases classified as non-respondents	54	69
Number of cases where sample register information was wrong and response could not be used	104	91
Number of questionnaires used in analysis	1 042	1021

CYPRUS (International)

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Road Vehicle Register

***Name of organisation who maintains the register*:** Road Transport Department

***Frequency of update*:** Yearly

***Frequency of access to draw the samples*:** Full coverage

***Arrangements for accessing the register*:**

Very good-operation of the Statistical service with the Road Transport Department

***Information obtained from the register*:**

Full coverage the international movements of freight (inbound and outbound journeys) of vehicles and enterprises.

***Procedure for reminders*:**

There is no non-response. All transport vehicles moving on international roads to filled statistical forms of departure or arrival at the ports in Cyprus.

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:** None

Time unit: All journey

Time units of quarter 1 of 2004 included in the survey: All (13 weeks)

***Stratification*:**

Collected overall data of the international freight transport

Recording of journey data sent to Eurostat:

Single stop: Only the commodity with the highest weight is taken into account.

Multi stop: This type of journey does not take place in International Road transport.

Collection/delivery: This type of journey does not take place in International Road transport.

Main figures: Not available

LATVIA

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Register of motor vehicles

Name of organisation who maintains the register: Road Traffic Safety Directorate

***Frequency* of update:** On-line

***Frequency of access to draw the samples*:** Once a month

***Arrangements for accessing the register*:**

CSB has access to extract from The Register of Motor Vehicles. This part of the Register contains information on transport vehicles which owned by natural or legal persons and which at the moment of sample formation had passed the yearly technical inspection and could be legally operated.

***Information obtained from the register*:**

Place of registration, model, made, number of registration, self-weight, load capacity, road tractor or not, body type, year of production, name of owner, address of owner, mark about leasing and address of leaseholder.

Used for stratification: load capacity, year of production and name of owner.

Procedure for reminders:

Central Statistical Bureau of Latvia has a standard routine for reminders:
Questionnaires were sent out 7 days before the start of the survey week with a request to send back the questionnaire within 5 days following the survey week. A prepaid envelope for answer has been enclosed. If the respondent did not reply, a remainder containing another copy of the questionnaire has been sent on the 19th day following the survey week. If the respondent did not reply again another remainder letter has been sent after 4 weeks. All this work has been done at the central office of the CSB. Regional offices have not involved in the survey.

Total response rate in 2006 was 81.68%.

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:**

Special purpose vehicles such as truck cranes, fire-flightiness vehicles, road maintenance vehicles and other special purpose vehicles are excluded from the survey

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

***Stratification*:**

The sample for one month (4 weeks within the first two months of each quarter and 5 weeks within the third month of each quarter) is obtained using a single stage stratified sampling.

All transport vehicles are distributed over 25 strata depending on:

- the place of registration (Riga including the district of Riga, and the rest of Latvia),

- the load capacity of the vehicle (4 groups for lorries; load capacity below 1.5 t; load capacity from 1.5 t to 5 t; load capacity from 5 t to 10 t; load capacity over 10 t, a separate group for road tractors; year of production (3 groups – for year 2007 these are: production year before 1993, 1994 to 2000, 2001 and after),

- and status (legal or private person).

As an example, the table below displays the strata used for sample allocation Q1 2007:

Stratum	Capacity	Place of Registration	Year of production	Status	Sample size	Monthly sample allocation
1	cap.=<1,5t	Riga (including the district of Riga)	All	Legal	104	0.34
2	cap.=<1,5t	all Latvia without Riga and the district of Riga	All	Legal	65	0.32
3	1,5<cap.=<5t	Riga (including the district of Riga)	All	Legal	65	0.52
4	1,5<cap.=<5t	all Latvia without Riga and the district of Riga	All	Legal	65	0.57
5	5t<cap.<=10t	Riga (including the district of Riga)	2001 – 2007	Legal	13	1.04
6	5t<cap.<=10t	Riga (including the district of Riga)	1994 – 2000	Legal	13	0.60
7	5t<cap.<=10t	Riga (including the district of Riga)	to 1993 (including)	Legal	13	0.52
8	5t<cap.<=10t	all Latvia without Riga and the district of Riga	2001 – 2007	Legal	13	2.10
9	5t<cap.<=10t	all Latvia without Riga and the district of Riga	1994 – 2000	Legal	13	0.74
10	5t<cap.<=10t	all Latvia without Riga and the district of Riga	to 1993 (including)	Legal	65	1.58
11	cap.>10t	Riga (including the district of Riga)	2001 – 2007	Legal	65	3.13
12	cap.>10t	Riga (including the district of Riga)	1994 – 2000	Legal	39	1.70
13	cap.>10t	Riga (including the district of Riga)	to 1993 (including)	Legal	26	1.30
14	cap.>10t	all Latvia without Riga and the district of Riga	2001 – 2007	Legal	78	4.32
15	cap.>10t	all Latvia without Riga and the district of Riga	1994 – 2000	Legal	78	2.94
16	cap.>10t	all Latvia without Riga and the district of Riga	to 1993 (including)	Legal	78	2.34
17	the trucks	Riga (including the district of Riga)	2001 – 2007	Legal	169	2.17
18	the trucks	Riga (including the district of Riga)	1994 – 2000	Legal	130	2.37
19	the trucks	Riga (including the district of Riga)	to 1993 (including)	Legal	26	1.99
20	the trucks	all Latvia without Riga and the district of Riga	2001 – 2007	Legal	143	2.60
21	the trucks	all Latvia without Riga and the district of Riga	1994 – 2000	Legal	143	2.56
22	the trucks	all Latvia without Riga and the district of Riga	to 1993 (including)	Legal	39	2.29
31	cap.<=5t	all Latvia	All	Private	52	0.18
32	cap.>5t	all Latvia	All	Private	52	1.57
33	the trucks	all Latvia	All	Private	13	3.39
Total					1560	0.96

Recording of journey data sent to Eurostat:

Multi stop: Multi-stop journeys are recorded by vertical stages.

Estimation of maximum permissible laden weight:

Maximum permissible laden weight is estimated by adding load capacity and basic weight.

Calculation of weighting factors:

The monthly weighting factors are calculated as: $\frac{M}{S+S'}$

M = mean of population between the beginning and the end of the reference month.

S = number of questionnaires used in analysis (in a stratum, during the reference period).

S' = number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.).

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	134 858	151 121
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	6 226	6 240
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	2 111	2 149
Number of cases classified as non-respondents	696	694
Number of cases where sample register information was wrong and response could not be used	192	169
Number of questionnaires used in analysis	3 227	3 228

LITHUANIA

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Database of the registered road vehicles

***Name of organisation who maintains the register*:** State enterprise 'Regitra'

***Frequency of update*:** Continuously

***Frequency of access to draw the samples*:** Once a quarter

***Arrangements for accessing the register*:**

The data are forwarded from State enterprise 'Regitra' at specified dates of deliveries.

The dates for sampling are:

- First quarter 14 November
- Second quarter 14 February
- Third quarter 15 May
- Fourth quarter 14 August

***Information obtained from the register*:**

Registration number, type of road vehicle, enterprise code in statistical profile business register, year of production, name of private operators, name of business operators, address and total weight (this information in the register made up about 40%).

All records are used in stratification except total weight.

***Procedure for reminders*:**

First reminder: 2 weeks after the surveyed week by post
Second reminder: 4 weeks after the surveyed week by post
Non-response report: 7 weeks after the surveyed week

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:**

Special purpose road vehicle.
Goods of road transport vehicles with weight are less than 6 tonnes in the case of single motor vehicle.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

***Stratification*:**

The sample for one quarter is obtained using a simple random sample in each stratum. All road good transport vehicles are distributed in 19 strata. Road goods transport vehicles are distributed in the following way:

1) Vehicles are classified by owners in each stratum (vehicles belonging to an enterprise or private)
2) By types of vehicles in each stratum (lorries or road tractors)
3) Vehicles – lorries are classified by age of production in each stratum, namely under 10 years and more than 10 years. Road tractors are not classified by year of production
4) Road good vehicles, which have licenses for international journeys
5) Road good vehicles, which have licenses for carriage of dangerous goods

Recording of journey data sent to Eurostat:

Single stop: If more than one goods commodity is carried, only the main commodity is coded.

Multi stop: Multi-stop journeys are coded by consignments. If more than one goods commodity is carried, only the main commodity is coded.

Calculation of weighting factors:

$$\text{Weighting factors} = 13 * \frac{N}{S + S'}$$

N= number of vehicles in the register (in a stratum)

S= number of questionnaires used in analysis (in A1 dataset)

S'= number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	44 019	47 724
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	15 283	15 372
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	2 886	2 827
Number of cases classified as non-respondents	3 636	3 738
Number of cases where sample register information was wrong and response could not be used	2 506	2 603
Number of questionnaires used in analysis	6 255	6 204

LUXEMBOURG

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: National vehicle register

Name of organisation who maintains the register: Ministry of Transport

Frequency of update: 3 times a year

Frequency of access to draw the samples: Each week selected for sampling

Arrangements for accessing the register:

Requests from Statec are sent to the Ministry of Transport, who treats them. The results are then sent back to Statec.

Information obtained from the register:

Age of the vehicle, load capacity, maximum authorised weight, total number of axles including those of trailers and semi-trailers, use of the vehicle (own account or for hire or reward), name and address of the owner, registration number, power of engine and NACE code under which the owner is registered.

Procedure for reminders:

A reminder is sent to the owner 3 weeks after the deadline when the questionnaire was due to be returned. After the new deadline of the reminder, every 2 weeks a second and third reminder is sent out. The 4th reminder is sent out as a registered mail. If there is no answer, the help of the tribunal is requested, according to a legal procedure.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Lorries and vans with load capacity below 3 tonnes, agricultural vehicles, military vehicles and special-purpose vehicles (not equipped for goods transport).

Time unit: 1 week

Time unit of quarter 1 of 2006 included in the survey: 7 weeks

Stratification:

There is no stratification: all vehicles registered on 1st January are distributed over 26 weeks in the beginning of the year. Vehicles registered during the year are distributed as follows: Week 27: vehicles registered during the first semester of the year; Week 28: vehicles registered during the second semester of the year

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	9 532	9 806
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	8 328	8 653
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	1 789	1 711
Number of cases classified as non-respondents	453	515
Number of cases where sample register information was wrong and response could not be used	0	0
Number of questionnaires used in analysis	6 194	6 166

HUNGARY

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** National stock of Goods carriage motor vehicles

***Name of organisation who maintains the register*:**

Central Office for Administrative and Electronic Public Services

***Frequency of update*:** Twice a year

***Frequency of access to draw the samples*:** Once a year

***Arrangements for accessing the register*:**

The agreement between the Hungarian Statistical Office and Central Office for Administrative and Electronic Public Services, based on the Government-decree of the National Statistical Data-collecting Programme.

Information obtained from the register:

Name, address, legal status (corporation or individuals), load capacity, vehicle type and age of the vehicle.

Used in stratification: Legal status, load capacity, vehicle type and location.

***Procedure for reminders*:**

First reminder: 8 days after the end of the reference period by post.
The non-respondents have to answer within 5 days. If they still don't return the questionnaires, the HSO may take the necessary steps to impose a penalty.

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:**

Lorries with less than 3.5 tonnes capacity.

Special-purpose vehicles: agricultural vehicles, military vehicles and vehicles belonging to central or local public administrations.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

***Stratification*:**

The stratification is based on the national stock of Goods carriage vehicles. The sample is stratified according to:

1st criteria: vehicle operator's legal status (corporation or individual)

2nd criteria: load capacity 4 categories: load capacity between 3.5 – 5 tonnes, 5 – 10 tonnes, above 10 tonnes, road tractors as a separate stratum)

After this stratification we insure the required representation of the sample. As a 3rd criteria, at data grossing-up, the 20 countries are taken into consideration.

Recording of journey data sent to Eurostat:

Single stop: If more than one goods commodity is carried, only the commodity with the highest weight is taken into account.

Multi stop: Multi-stop journeys are coded by vertical stages. In the calculation for the multi stop journeys, the total weight is the sum of weights loaded at each stop.

Calculation of weighting factors:

The main formulae for the grossing (calculated for each of the 160 strata) is as follows:

$$\text{Weighting factor} = 13 * (1 + C) * \frac{N}{S}$$

N = total stratum population,
S = number of vehicles selected for initial sample and questionnaires despatched to vehicles owner.

C = correction factor calculated as follows: $\frac{0{,}8 * n3 + n4}{n1 + n2}$

n1= the number of vehicles (respondents) that could be used for analysis (including those who had any activity during the sampled period and those where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock.)
n2 = respondents whose performance is 0 because the vehicle was withdrawn from circulation;
n3 = non respondents – no information; wrong address; the vehicle do not belong to the addressed person (register fault)
n4 = vehicle has been sold, leased, performs somewhere else

As can be seen from the formulae, the non-respondents, wrong information in sample register and vehicles without any performance are present in different ways in the calculating system.

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	77 549	80 678
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	59 894	55 764
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	12 124	11 660
Number of cases classified as non-respondents	7 551	7 574
Number of cases where sample register information was wrong and response could not be used	16 541	14 942
Number of questionnaires used in analysis	23 678	21 587

MALTA

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Vehicle registration database

***Name of organisation who maintains the register*:** Department of Licensing and Testing

***Frequency of update*:** Continuously

***Frequency of access to draw the samples*:** Quarterly

***Arrangements for accessing the register*:**

The NSO has an agreement with the Malta Transport Authority within whose portfolio the Licensing and Testing Directorate resides, through which the latter give access to the data in their register. Indeed the MTA has recently agreed to provide the NSO with an electronic copy, with selected variables, of this register.

***Information obtained from the register*:**

Registration number, name and surname of operator and his identity number, address, make, model, body type and gross vehicle weight.

Used in stratification: Gross vehicle weight and type of body.

***Procedure for reminders*:**

Individual interviewers carry out the survey. There is no standard routine for reminders whilst the response rate was 67.6 % for the domestic survey and 32.7 % for the international operators.

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle and transport firm

***Types of units excluded*:**

International transport: no exclusions are possible because the population is very small (70 trucks).

Local transport of goods by road: the survey is carried out in accordance with the requirements of the Regulation.

Time unit: 1 weekday to which the statistical unit is assigned and both weekend days

Time units of quarter 1 of 2004 included in the survey: 0

***Stratification*:**

The overall sample size is 2080 trucks, which are distributed 40 per week. The total number of 5-9.9 tonnage trucks sampled is 780, which amount to 15 per week (or 3 per weekday). The total number of 10+tonnage trucks sampled is 1300, which amount to 25 per week (or 5 per weekday). The idea is to allocate to each day of the week 8 trucks in all, and ask the individual to answer for that particular day to which he is assigned together with both weekend days for that week (i.e. Saturday and Sunday). Each address is tagged with a week number (running from 1 to 52) and a day number (running from 1 to 5, 1 being Monday to 5 being Friday).

Main figures: Not available

NETHERLANDS (Own account)

SAMPLING REGISTER USED FOR THE SURVEY

Name of register:

a. National Vehicle Register
b. National Business Register

Name of organisation who maintains the register:

a. RDW (Centrum voor Voertuigtechniek en Informatie)

b. Statistics Netherlands

Frequency of update:

a. Quarterly

b. Monthly

Frequency of access to draw the samples:

a. Yearly (December): sample frame is drawn.

b. Quarterly update of sampling frame for new and disappeared enterprises.

Arrangements for accessing the register:

Statistics Netherlands (CBS) and RDW agreed the following:

RDW - processes the mutations in the enterprises

CBS - makes the sample-designs
- draws the sample
- processes the mutations in the enterprises

Information obtained from the register:

The National Vehicle Register of RDW (Centrum voor Voertuigtechniek en Informatie) gives information on:

- registration number of the vehicle
- type of motor vehicle: lorry or van/road tractor
- loading capacity of the vehicle / maximum permissible weight of road tractor
- empty weight of the vehicle
- name and address of the holder or enterprise of the registration number(s) of the vehicle
- number of the chamber of commerce of the enterprise

The CBS Business Register provides information which enterprises can be classified.

Register data used in the stratification of the sample:

- NACE classification
- type and loading capacity of the vehicles

Procedure for reminders:

There is a standard routine for reminders. The procedure is carried out by CBS.

Unit non response (non response of a complete firm)
-18 Days after the reported time period, the non respondents receive a first written reminder.
-14 Days after the day that the first written reminders are mailed, the non respondents receive a second written reminder.
-14 Days after the mailing of the second written reminders non respondents will be called by CBS or will be visited by a field worker of CBS.

In the worst case (minority), after contact by phone or visit by the CBS field worker, CBS is allowed to take the law on the non-respondent (No priority at this moment).

SAMPLING METHODOLOGY

Statistical unit: Transport firm

Types of units excluded:

Vehicles with a loading capacity below 2 tonnes, vehicles not used for goods transport on public roads have been excluded such as buses campers and vehicles older than 25 years.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

The survey consists of a two-step sampling frame.

First step:
First all enterprises are stratified according to their NACE heading.
The population is stratified in space and time.
Per stratum the population is divided into 52 groups of enterprises. Every group within the stratum is linked to a week in the statistical year.

Second step:
For every enterprise the vehicles are divided into 4 classes for the second step.
For these classes a sample is drawn according to a pre-specified sampling fraction per class. The loading capacity classes and the fractions have been specified as follows:

a. Delivery vans fraction 0,002

b. Special types of commercial vehicles not used for freight transport, fraction 0,10

c. Commercial vehicles with loading capacity greater than or equal to 2 tonnes and smaller than 15 tonnes:

- enterprises with 5 or more vehicles, fraction 0,20
- enterprises with 4 vehicles, fraction 0,25
- enterprises with 3 vehicles, fraction 0,33
- enterprises with 2 or 1 vehicles, fraction 0,50

d. Commercial vehicles with loading capacity greater than or equal to 15 tonnes:

- enterprises with 2 or more vehicles, fraction 0,5
- enterprises with 1 vehicle, fraction 1,0

Used codes to stratify:

STEP 1: NACE category and week for which information is requested

STEP 2: Type or loading capacity of the vehicle

Recording journey data sent to Eurostat:

Single stop: Sometimes a simplification is made by the enterprise. In case the weight of a national shipment is below 1 tonne, the enterprises can combine several shipments. For international transport this can be done in case a shipment is smaller than 5 tonnes.

Multi stop: The same procedure as for single stop journeys. Multi-stop journeys are coded by vertical stages.

Collection/delivery: The place of loading is the centre in which most loadings have taken place (highest density). The place of unloading is the centre in which most unloadings have taken place (highest density). In case of an international journey with stops in more different countries, for every country at least one shipment should be given.

Main figures: Not available

NETHERLANDS (Hire or reward)

SAMPLING REGISTER USED FOR THE SURVEY

Name of register:

a. License register of hire and reward enterprises
b. Motor vehicle Register for those enterprises

***Name of organisation who maintains the register*:**

NIWO (Stichting Nationale en Internationale Wegvervoerorganisatie);

Frequency of update: Yearly

Frequency of access to draw the samples:

Yearly (December), sample frame is drawn; the sampling frame is updated quarterly for new and disappeared enterprises.

Arrangements for accessing the register:

Statistics Netherlands (CBS) and NIWO agreed the following:

NIWO
- incorporates the mutations in the hauliers register
- draws the samples
- organises the mailings and receipts of the questionnaires (paper and electronic)
- handles the response in a sample register

CBS
- makes the sampling-design
- receives twice per month the response-results
- handles the data-entry for paper forms
- checks the electronic data

Information obtained from the register:

The **enterprise register** of the NIWO contains:

- Code-number of the enterprise (license holder), license code
- Name enterprises
- Address enterprise
- Number of the chamber of commerce of the enterprise

The **motor vehicles register** of the NIWO contains:

- Code number of the enterprise (license holder, license code)
- Registration number of the vehicle

The registration number of the vehicle is linked to information from the **National Vehicle Register** of RDW Centrum voor Voertuigtechniek en Informatie to get information on:

- Loading capacity of the vehicle/ maximum permissible weight of road tractor
- Type of motor vehicles: lorry or van /road tractor
- Empty weight of the vehicle
- Fuel type
- Engine type (EURO norm)
- KW class of engine

Register data used in the stratification of the sample:

- Code number of enterprise for Hire and Reward
- Loading capacity for every vehicle for all enterprises

Procedure for reminders:

There is a standard routine for reminders. The procedure is carried out by NIWO.

Unit non response (non response of a complete firm)

a. 18 Days after the reported time period, the non respondents receive a first written reminder

b. 14 Days after the day that the first written reminders are mailed, the non respondents receive a second written reminder

c. 14 Days after the mailing of the second written reminder, non-respondents will be called by NIWO or will be visited by a field worker of CBS

In the worst case (minority), after contact by phone or visit by the field worker, the non-respondent can be reported to the Inspectie Verkeer en Waterstaat.
This inspectorate of the government is allowed to take the law on the non-correspondent (no priority at the moment).

SAMPLING METHODOLOGY

Statistical unit: Transport firm

Types of units excluded:

In the first step, no unit of the sample is left out. In the second step, vehicles with a loading capacity below 2 tonnes are excluded.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

First step

The total population of enterprises is stratified in space and time.
For every enterprise the total loading capacity is calculated. The enterprises are divided in 52 groups. Every group is linked to a week in the statistical year.

Second step

For every enterprise the vehicles are divided into 4 separate classes of vehicles.
For this classes a sample is drawn according to a pre-specified sampling fraction per class.
The loading capacity classes and the fractions are specified as follows:

a. Delivery vans fraction 0,01
b. Special types of commercial vehicles not used for freight transport, fraction 0,10
c. Commercial vehicles with loading capacity greater than or equal to 2 tonnes and smaller than 15 tonnes, fraction 0,20.
d. Commercial vehicles with loading capacity greater than or equal to 15 tonnes, fraction 0,5.

If in the classes c. and d., the number of vehicles per class x fraction is smaller or equal to 1, always 1 vehicle is chosen at random.

Used codes to stratify:

Step1: Week for which information is requested.

Step2: Type or loading capacity of the vehicle.

Recording of journey data sent to Eurostat:

Single stop: Sometimes a simplification is made by the enterprise. In case the weight of a national shipment is below 1 tonne, the enterprises can combine several shipments. For international transport this can be done in case a shipment is smaller than 5 tonnes.

Multi stop: The same procedure as for single stop journeys. Multi-stop journey are coded by vertical stages.

Collection/delivery: The place of loading is the centre in which most loadings have taken place (highest density). The place of unloading is the centre in which most unloadings have taken place (highest density). In case of an international journey with stops in more different countries, for every country at least one shipment should be given.

Main figures: Not available

AUSTRIA

SAMPLING REGISTER USED FOR THE SURVEY

Name of register:

1. Vehicle-Register (VR)
2. Enterprise-Register (ER)

Name of organisation who maintains the register: Bundesanstalt Statistik Österreich

Frequency of update:

Vehicle Register: Monthly
Enterprise Register: Continuously

Frequency of access to draw the samples: Once a quarter

Arrangements for accessing the register:

Continuous supplementing of Vehicle Register records with Enterprise Register information (Enterprise number, Bundesland/Federal country).

Information obtained from the register:

Vehicle Register: Bundesland, registration office, vehicle registration number, vehicle identification number, registration date, type of vehicle, empty weight, load capacity, maximum permissible weight and link to ER.

Enterprise Register: Enterprise number (link to VR), name of enterprise and address.

Stratum: Load capacity class of enterprise by Bundesland and the parameters (transport on own account/hire or reward)

Procedure for reminders:

First reminder: 3 weeks after the surveyed week
Second reminder: 5 weeks after the surveyed week
Penalty procedure: starts 6 weeks after the second reminder

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Excluded are local units with ÖNACE 7525 (Fire brigade),8041 (Driving schools), 9500 (Private household), 9900 (Exterritorial organisations and corporations), local units without tractive vehicles.

Excluded are vehicles with a load capacity less than 2 tonnes, agricultural vehicles, vehicles of regional administrative bodies and foreign organisations and military vehicles.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

Basis for stratification: Load capacity class of enterprise by Bundesland and the parameters "Transport on own account" and "Hire or reward".

The same classes are applied for each Bundesland:

- Class 10: < 10 tons load capacity; transport on own account *and* hire or reward
- Class 21: 10 < 100 tons load capacity; transport on own account
- Class 22: 10 < 100 tons load capacity; hire or reward
- Class 31: ≥ 100 tons load capacity; transport on own account
- Class 32: ≥100 tons load capacity; hire or reward

Recording journey data sent to Eurostat:

Single stop: None. Transport operators are required to fill in as many lines of the questionnaire as different commodity groups are transported.

Multi stop: Multi-stop journeys are coded by consignments. The used record structure contains a fixed part (vehicle data) and n variable parts for n basic operations in the course of one laden journey.

Collection/delivery: Transport operators fill in only one line for a pick-up or a distribution round mentioning the first and the last place of loading/unloading and the number of loading/unloading operations.

Calculation of weighting factors:

For the annual grossing procedure four consecutive reporting weeks (w = 1 … 52) of a year are combined to periods (z = 1 … 13) respectively with $z_1 = [w_1; w_4]$ … $z_{13} = [w_{49}; w_{52}]$

Every dataset is then multiplied by a stratum-specific grossing factor for the federal state (= province or Bundesland) b, the load capacity class g, and the type of enterprise (own account/hire or reward) a:

$$\text{Weighting factor} = \frac{\alpha_z F_{gbaz}}{f_{gbaz}}$$

where

f_{gbaz} : number of selected vehicle-weeks of the stratum gba in period z minus weeks classified as "non-response". For periods affecting two quarters of a year the factor has to be calculated by adding respective parts for both quarterly samples.

F_{gbaz} : number of tractive vehicles in the population of the stratum gba in the period z. For z = [1; 3] this is the vehicle population of the first quarter, for z = [4; 6] the population of the second quarter, for z = [7; 9] that of the third quarter and for z = [10; 13] the one of the fourth quarter of the reporting year.

The value for α for z = 1 and z = 13 can be found in the following table:

	2006	2007	2008	2009
z = 1	4.00	4.00	4.00	4.29
z = 13	4.00	4.11	4.52	4.00

For all other periods the value is 4.00.

Main figures	**Year 2006**
Total number of relevant goods vehicles in the country	72 743
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	26 000
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	5 257
Number of cases classified as non-respondents	261
Number of cases where sample register information was wrong and response could not be used	1 269
Number of questionnaires used in analysis	19 199

Note: The sampling procedure has been changed effective January 1st 2006 from an enterprise based survey to a vehicle based survey. Therefore, main figures are published only for 2006.

POLAND

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Statistical motor vehicle database (created for the purpose of this survey)

***Name of organisation who maintains the register*:** Central Statistical Office

Frequency of update: Once a quarter

***Frequency of access to draw the samples*:** Once a quarter

***Arrangements for accessing the register*:**

Data are received from about 400 regional road vehicle registers (according to NUTS 4 - level) at the end of each quarter.

***Information obtained from the register*:**

Information to conduct the survey: registration number, name and address of the vehicle owner, type of vehicle, year of manufacture, load capacity, maximum permissible weight, type of body and administrative region (NUTS4-codes).

Information for the stratification: type of vehicle, year of manufacture, load capacity and administrative region (NUTS2-codes).

***Procedure for reminders*:**

First reminder: 2 weeks after the survey week
Second reminder: 5 weeks after the survey week

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:**

Road motor vehicles over 25 years old.
Lorries with 3.5 and less than 3.5 tonnes of maximum permissible weight.
Military vehicles, vehicles of the border guard, police vehicles, vehicles belonging to central or local public administrations and agricultural tractors.
Special purposes vehicles.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks).

***Stratification*:**

The sample is stratified according to:

- Type of vehicle (2 classes): lorry; road tractor
- Age (5 age-groups): 0-5, 6-10 (younger), 11-15; 16-20, 21-25 (older)
- Load capacity (2 classes): <6 tonnes; => 6 tonnes (concerning the lorries only)
- 16 voivodships (NUTS2-codes)

The sample is divided into 15 large strata:

11 - lorries with under 6 tonnes of load capacity and within the 0-5 age group
12 - lorries with under 6 tonnes of load capacity and within the 6-10 age group

21 - lorries with under 6 tonnes of load capacity and within the 11-15 age group
22 - lorries with under 6 tonnes of load capacity and within the 16-20 age group
23 - lorries with under 6 tonnes of load capacity and within the 21-25 age group
31 - lorries with 6 tonnes and more than 6 tonnes of load capacity and within the 0-5 age group
32 - lorries with 6 tonnes and more than 6 tonnes of load capacity and within the 6-10 age group
41 - lorries with 6 tonnes and more than 6 tonnes of load capacity and within the 11-15 age group
42 - lorries with 6 tonnes and more than 6 tonnes of load capacity and within the 16-20 age group
43 - lorries with 6 tonnes and more than 6 tonnes of load capacity and within the 21-25 age group
51 - road tractors within the 0-5 age group
52 - road tractors within the 6-10 age group
61 - road tractors within the 11-15 age group
62 - road tractors within the 16-20 age group
63 - road tractors within the 21-25 age group

Each of the strata is allocated into 16 voivodships (NUTS2- codes). The sample was allocated to the stratum in proportion to the population of the stratum and distributed equally among the 13 weeks of the quarter.

The sampling fraction is greater for younger and heavier vehicles, which means that the sample of younger and heavier lorries is twice as big as the sample of older and lighter lorries and the sample of younger road tractors is 3 times big than the sample of older road tractors.

Recording of journey data sent to Eurostat:

Single stop: Transport operators are requested to give only one main type of goods (dominant considering the weight of goods).

Multi stop: Multi-stop journeys are coded by consignments. For each place of loading can be loaded only one main type of goods which is dominant considering the weight of the goods. In the recording of type 2 journeys more than one type of goods can be carried. Goods are unloaded according to the method FIFO (first type of goods which is loaded is first unloaded).

Collection/delivery: The transport operators give only the first and last place of loading/unloading and the number of stops. The type 3 journeys are recorded only for national transport.

The weight of goods and tonnes-kilometres are calculated according to the formulae:

Weight of goods (A2.2) = weight of goods (A3.2)

Tonnes-km = $\sum$(A3.2 * A3.7)/20 where: A3.2 – weight of goods, A3.7 – distance travelled

Other variables: The axle configuration of vehicle and the type of transport are recorded as the most frequently-used during the survey week.

Calculation of weighting factors:

$$\text{Weighting factors} = 13 * C * \frac{N}{n}$$

N = total number of vehicles (in a stratum)

n = number of vehicles selected for the sample

C = correction factor computed as $1 + \frac{S1}{S2}$

S1 = number of cases classified as non-response and number of other cases

S2 = number of active stock (active vehicles and non-working vehicles)

Estimation of maximum permissible laden weight:

For a given vehicle whose load capacity is known, the maximum permissible laden weight is estimated using the most common maximum permissible laden weight recorded by other vehicles of the same load capacity.

In case both the vehicle's load capacity and maximum permissible laden weight is unknown in poviat road vehicle registers, we receive special information on model and brand of vehicles. Missing information on maximum permissible laden weight and load capacity is completed on the basis of the vehicle catalogue.

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	540 954	545 011
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	46 540	49 036
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	8 602	9 974
Number of cases classified as non-respondents	6 853	7 208
Number of cases where sample register information was wrong and response could not be used	12 102	9 051
Number of questionnaires used in analysis	18 983	22 803

PORTUGAL

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Heavy goods road vehicle file

Name of organisation who maintains the register:

National Organisations:

- I.R.N. (Instituto dos Registos e do Notariado)
- I.M.T.T. (Instituto da Mobilidade e dos Transportes Terrestres)

Frequency of update: Continuously

Frequency of access to draw the samples: Once a year

Arrangements for accessing the register:

Through IMTT we obtain all registers from heavy goods road vehicles while the file from IRN allows obtaining the name and address of the owners.

Information obtained from the register:

Vehicle registration, 1st year of the vehicle registration, maximum permissible laden weight, load capacity, number of axles, category of the vehicle, type of transport, number of the identification of the owners, name of the owners, address of the owners and CAE.

Used in stratification: NUTS II of the address of the owners (Norte, Centro, Lisboa, Alentejo and Algarve), Category of the vehicle (Lorry or Road Tractor), Gross weight class, Type of transport (Own Account, Hire or Reward).

Procedure for reminders:

The first reminder goes out 3 weeks after the end of the month under observation, the second reminder goes out three weeks after the first one and the last reminder goes out only for those who have a fax number.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

All vehicles with maximum permissible laden weight equal or inferior to 3500 kg, vehicles not used for the transport of goods, such as agricultural and military vehicles, fire engines and vehicles belonging to the public administration.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

The sample is stratified according to the following variables:

First two digits: Region (Norte, Centro, Lisboa, Alentejo and Algarve)

Third digit: Category of vehicle (Lorry or Road Tractor)

Fourth digit: Gross weight class (Lorry):

3501 – 10000 kg
10001 – 16000 kg
16001 – 19000 kg
19001 – 22000 kg
22001 – 26000 kg
over 26000

Gross weight class (Road Tractor):

3501 – 7000 kg
over 7000

Fifth digit: Type of transport (Own Account, Hire or Reward)

Recording of journey data sent to Eurostat:

Single stop: If in the same journey, more than one goods commodity is carried, we consider that journey as type 2.

Multi stop: Multi-stop journeys are coded by consignments. This type of journey is considered when there is more than one goods commodity being carried or several stops during the journey. When the answer implies several stops, we try to simplify the journeys and transform them into type 1 journeys, for instance, if the vehicle becomes empty we consider a new road freight transport operation

Collection/delivery: This type of journey is considered whenever there is a collection/delivery of goods with an unrecorded number of stops with short distances separating them. When retrieving data we often face the following situations.

1. On the same journey, when an empty packaging retrieval occurs simultaneously (type of goods: 250), the registered number of kilometres travelled equals the total kilometres divided by the number of goods being carried. The calculation of the tonnes-kilometres is made in the same way as for type 2 journeys

2. When there is no simultaneous retrieval of empty packaging, we consider as origin the first point of departure and as the last the farthest one (not the last), we register the kilometres that were effectively travelled (usually, the sum of all the stages is huge), and the calculation of the tonnes-kilometres is made according to: weight * distance / 20.

Calculation of weighting factors:

$$\text{Weighting factor} = 13 * \frac{N}{S + S'}$$

N =Initial universe after the proportion of vehicles no longer belonging to the sample (answers not used) has been subtracted: $N = I * (1 - \frac{A}{E})$

I = initial universe
A = answers not used
E = sample
S = number of questionnaire used in analysis
S' = number of vehicles for which no activity was recorded but vehicle could be considered as active (holiday, no work, etc.)

Estimation of maximum permissible laden weight:

Maximum permissible laden weight is estimated by adding the gross weight of the vehicle and the gross weight of the trailers (or semi-trailer) used.

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	127 156	128 348
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	29 628	29 594
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	6 767	6 830
Number of cases classified as non-respondents	8 697	8 935
Number of cases where sample register information was wrong and response could not be used	3 914	3 732
Number of questionnaires used in analysis	10 250	10 097

ROMANIA

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Vehicle Register

***Name of organisation who maintains the register*:** Ministry of Administration and Interior

***Frequency of update*:** Quarterly

***Frequency of access to draw the samples*:** Once a quarter

***Arrangements for accessing the register*:**

The files of vehicles are received quarterly from Ministry of Administration and Interior on CD, then, before the sample is drown-up, the nomenclature of vehicles is updated on base information provided of the files of Ministry of Administration and Interior, as well as, with the scrapped vehicles reported by owners of the vehicles.

***Information obtained from the register*:**

Number of registration, category of vehicle, subcategory of vehicle, type of vehicle (lorry, road tractor), year of manufacturing, maximum permissible weight, load capacity, number of axles of vehicle, type of license (national or international transport), type of transport (own account or hire or reward).

Used in stratification: Type of license, type of transport, type of vehicle, load capacity.

***Procedure for reminders*:**

The transport operators are contacted by phone.

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:**

Vehicles with load capacity less than 3.5 tonnes are excluded.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

***Stratification*:**

The sample is stratified according to the following variables:
- Destination: national - the code is '**0**' (example: **0**113) and international - the code is '**1**' (example: **1**113)
- Type of vehicle
- Type of transport (own account or hire or reward)
- Load capacity
- Statistical regions

Recording of journey data sent to Eurostat:

Single stop: Journeys with the same distance, same goods, same quantity, same place of loading and unloading are recorded on a single row.

Multi stop: Multi-stop journeys are recorded by vertical stages.

Calculations of weighting factors: …

$$\text{Weighting factor} = 13 * C * \frac{N}{n}$$

N = total number of vehicles in a stratum

n = number of vehicles selected for the sample

C = correction factor computed for each stratum *h* as $\frac{n_{h1} + n_{h3}}{n_{h1}} * \frac{n_{h1} + n_{h2} + n_{h3} + n_{h4}}{n_{h1} + n_{h2} + n_{h3}}$

Where

n_{h1} = number of vehicles with activity from stratum h

n_{h2} = number of vehicle without activity from stratum h

n_{h3} = number of refusal from stratum h

n_{h4} = number of vehicle with uncertain activity from stratum h

Main figures	**Year 2006**
Total number of relevant goods vehicles in the country	170 151
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	36 479
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	10 802
Number of cases classified as non-respondents	938
Number of cases where sample register information was wrong and response could not be used	15 071
Number of questionnaires used in analysis	9 668

Note: Romania had no obligation to report for years prior its accession in 2007 and started to report data for the reference year 2006.

SLOVENIA

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:** Register of Road Vehicles

***Name of organisation who maintains the register*:** Ministry of Interior

***Frequency of update*:** Continuously

***Frequency of access to draw the samples*:** Once a quarter

***Arrangements for accessing the register*:**

The replication of the statistical version of the Register of Road Vehicles at the Ministry of the Interior is made on the last day of every month in compliance with the agreement between the Statistical Office of RS and the Ministry of the Interior and the Annual Programme of Statistical Surveys. Before each quarterly sampling, the Register of Motor Vehicles is matched with the Business Register of Slovenia to obtain information on activity and address for owners and users of vehicle.

***Information obtained from the register*:**

Register of Motor Vehicles: identifier of the owner/user, type of the owner (used in the stratification), registration number, type of vehicle, body type, unladen weight (used in the stratification), maximum permissible laden weight (used in the stratification), made in year, number of axles, date of first registration, date of first registration in Slovenia, number of axles, type of fuel used.

Business Register: Main activity of the operator, name of the owner/user, address of the owner/user.

Used in stratification: Type of the owner, unladen weight and maximum permissible laden weight.

***Procedure for reminders*:**

First reminder - 10 days after the observation
Second reminder - 23 days after the observation
Third reminder - telephone call 30-45 day after the observation to key respondents

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:**

Agricultural, military and public service vehicles and special purposes vehicles.
Vehicles with load capacity below 2000 kg.

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

***Stratification*:**

Strata were defined with the type of ownership (2 classes: legal entities, natural persons) and loading capacity (4 classes: 2.00–4.99, 5.00–9.99, 10.00 and more tonnes, road tractors). The allocation of units among the strata is proportional with slight corrections due to fact that the sample size in each stratum should be divisible by 13 (13 weeks in a quarter).

Recording of journey data sent to Eurostat:

Single stop: Only the main type of goods carried is recorded.

Multi stop: Multi-stop journeys are coded by consignments. Only the main type of goods carried is recorded.

Collection/delivery: Only the main type of goods carried is recorded.

Other variables: In case of usage of more than one trailer in the surveyed week, only information on the trailer used in majority of cases is collected.

Calculation of weighting factors:

$$\text{Weighting factors} = 13 * \frac{N}{E + I}$$

N = number of vehicles in the register (in a stratum)

E = units answering the survey regardless of the activity of the vehicle

I = units answering the questionnaire and beyond the target population that were included in the sample. These include cases were the capacity of the vehicle was below 2 tonnes or the vehicle was temporally (or permanently) withdrawn from the register.

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	20 430	20 557
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	9 099	8 161
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	1 513	1 460
Number of cases classified as non-respondents	1 817	1 712
Number of cases where sample register information was wrong and response could not be used	597	665
Number of questionnaires used in analysis	5 172	4 324

SLOVAKIA

SAMPLING REGISTER USED FOR THE SURVEY

***Name of register*:**

1. Vehicle Register
2. Register of operators

***Name of organisation who maintains the register*:**

1. Ministry of Interior of the Slovak Republic
2. Statistical Office of the Slovak Republic

***Frequency of update*:** Permanently

***Frequency of access to draw the samples*:** Yearly

***Arrangements for accessing the register*:**

Vehicle register: we take over from administrative sources, Ministry of Interior, annually. Sample survey is updated quarterly.

Operator's register (administrator Statistical Office of the Slovak Republic) is being currently updated.

Identifier Code of operators is converted between register.

***Information obtained from the register*:**

Vehicle register: Vehicle register mark, identifier of operators, type of vehicle, year of production, load capacity and date of input.

Operating register: Identifier of operators, type of operators, name of operators, settlement code, settlement name, street and number, ZIP code, NACE code and date of input.

Used in stratification: a low form of the vehicle owner (enterprise or tradesman), type of vehicle and loading capacity are used.

In the frame of sample survey the region is taken into the sampling. The region is not a criterion for the stratification.

***Procedure for reminders*:**

Respondent has to send the filled questionnaire in written or electronic form to the SO SR by 8 days after the end of the surveyed week.

First reminder: If the respondent does not fulfil his obligation within the deadline, a first reminder is sent 2 weeks after the surveyed week.

Second reminder: Sent 2 weeks after the 1st reminder.

The system of sending reminders is included in the programme, which automatically generates the reminders according to the surveyed week.

SAMPLING METHODOLOGY

***Statistical unit*:** Tractive vehicle

***Types of units excluded*:** None

Time unit: 1 week

Time units of quarter 1 of 2007 included in the survey: All (13 weeks)

***Stratification*:**

			Loading capacity
1 1 1	Enterprises/Business register	lorries	of less than 1.499 tonnes
2 1 1	Sole entrepreneurs/Tradesman register	lorries	of less than 1.499 tonnes
1 1 2	Enterprises/Business register	lorries	of 1.5 - 4.999 tonnes
2 1 2	Sole entrepreneurs/Tradesman register	lorries	of 1.5 - 4.999 tonnes
1 1 3	Enterprises/Business register	lorries	of 5 - 9.999 tonnes
2 1 3	Sole entrepreneurs/Tradesman register	lorries	of 5 - 9.999 tonnes
1 1 4	Enterprises/Business register	lorries	of 10 tonnes and more
2 1 4	Sole entrepreneurs/Tradesman register	lorries	of 10 tonnes and more
1 2 5	Enterprises/Business register	road tractor	
2 2 5	Sole entrepreneurs/Tradesman register	road tractor	

Recording of journey data sent to Eurostat:

Single stop: Each type of transported goods is surveyed separately within the journey.

Multi-stop: Multi-stop journeys are coded by consignments. Each type of transported goods is surveyed separately within the journey.

Calculation of weighting factors:

According to the recommendation in Reference manual, namely

Weighting factor = $13 * \frac{N}{S}$ **or** $13 * \frac{N}{S + S'}$ (depending on register quality)

N = number of vehicles in the register (in a stratum)
S = number of questionnaires used in analysis (in A1 dataset)

S' = number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

Estimation of maximum permissible laden weight:

Maximum permissible laden weight is estimated as **1.25 * loading capacity.**

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	110 738	102 993
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	10 400	10 400
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	2 278	2 658
Number of cases classified as non-respondents	1 413	1 513
Number of cases where sample register information was wrong and response could not be used	1 967	1 587
Number of questionnaires used in analysis	4 742	4 642

FINLAND (National)

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Vehicle Register

Name of organisation who maintains the register: Vehicle Administration Centre

Frequency of update: Constantly

Frequency of access to draw the samples: Once a quarter

Arrangements for accessing the register:

Statistics Finland uses a third party to make the computer runs and to fill in the information on the forms.

Information obtained from the register:

All together 49 variables are obtained from the register.

The following variables are used for stratification:

1: Type of transport (own account, hire or reward)
2: Type of vehicle (lorry, tractor + semi-trailer, tractor + trailer)

Procedure for reminders:

If a vehicle holder does not respond in two weeks, first reminder is sent out by post. If a vehicle holder still does not respond within two weeks, a second reminder is sent by post.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Lorries, whose gross vehicle weight is under 3.5 tonnes. Furthermore, military vehicles and vehicles that are not especially designed to transport goods such as museum vehicles, fire-engines and special vehicles.

Time unit: 2 days

Time unit of quarter 1 of 2007 included in the survey: Al time periods (45)

Each of the 2 100 vehicles has a survey period of 2 consecutive days. Altogether 6 weeks are covered per quarter. Each quarter: 2 weeks survey period followed by 2-3 weeks not included. This is repeated 3 times per quarter.

The periods that are not included are estimated to be equal to the time periods included. The time factor to one vehicle is 45.625.

Article 1 of Commission Regulation No 642/2004 is applied from 1st January 2006 onwards.

Stratification:

The population frame consists of lorries registered in Finland. The sample is drawn from this frame. The sample is spread evenly over all days of the week and the sample is self-weighting with respect to seasonal effects as well as to the regional coverage of 20 regions.

The sample is stratified by vehicle type (3) and type of operation (2). All together there are 6 strata. A different sampling rate is used for each of the six strata.

Strata:

1) Lorry without trailer, own account
2) Tractor with a semi-trailer coupled, own account
3) Lorry with a trailer coupled, own account
4) Lorry without trailer, hire or reward
5) Tractor with a semi-trailer coupled, hire or reward
6) Lorry with a trailer coupled, hire or reward

Recording of journey data sent to Eurostat:

Single stop: The commodity class of the goods that has the biggest weight is being used.

Multi stop: Multi-stop journeys are coded by consignments (the first place of loading for the goods and the last place of unloading of the goods are being used). The weight of goods is reported when biggest during the journey.

Collection/delivery: If there are more than 4 stops for loading/unloading during the journey, journey is classified as a collection or distribution journey. The first place of loading of the goods and the last place of unloading is being used. The weight of goods is reported when the biggest during the journey. Tonne-kilometres are divided by 2.

Calculation of weighting factors:

Weighting factor = $T * \frac{N}{R}$

T = Time factor

N = number of all vehicles (in a stratum)

R = number of respondents (active and non active in a stratum)

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	75 924	79 445
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	8 400	8 400
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	2 376	2 506
Number of cases classified as non-respondents	3 131	3 033
Number of cases where sample register information was wrong and response could not be used	371	340
Number of questionnaires used in analysis	2 522	2 521

FINLAND (International)

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Register of licenses for international traffic (VALLU)

Name of organisation who maintains the register: Country government of Oulu

Frequency of update: Constantly

Frequency of access to draw the samples: Once a year

Arrangements for accessing the register:

The County government of Oulu sends the data to Statistics Finland by CD-Rom once a year.

Information obtained from the register:

22 variables are obtained from the LILU register. These variables include contact information and information on number of licenses of the firms.

Procedure for reminders:

If a firm does not respond in three – four weeks, a reminder is sent with a new survey period to be reported.

SAMPLING METHODOLOGY

Statistical unit: Transport firm

Types of units excluded:

None, but the firms must have a license for international traffic

Time unit: 1 or 2 weeks

Time unit of quarter 1 of 2007 included in the survey: 10 weeks

Stratification:

The sampling is based on the number of licenses for international traffic. The firms are divided into four strata:

Stratum 1: firms with 1-2 licences (11-14 PERT)

Stratum 2: firms with 3-8 licences (15-18 PERT)

Stratum 3: firms with 9-19 licences (19-22 PERT)

Stratum 4: firms with over 19 licences (23-26 PERT)

Each stratum has been divided in four substrata according to activity in international transportation during previous years

Recording of journey data sent to Eurostat:

Multi stop: Multi-stop journeys are coded by consignments.

Calculation of weighting factors:

Weighting factors= $T * \frac{F * K}{R * B}$

T = Time factor

F = Number of firms in stratum 1 in population

R = Number of responded firms in stratum 1)

K = Number of border crossings by Finnish registered heavy goods vehicles in a quarter according to Finnish Customs

B = Total number of border crossings according to our survey.

Main figures	**Year 2005**	**Year 2006**
Number of statistical units (enterprises) in the country	5 490	5 862
Number of statistical units selected for initial sample and questionnaires dispatched to vehicle owners (some enterprises are sampled more than once in a year)	3 200	2 400
Number of cases where no unit activity was recorded during the sampled period	1 699	1 091
Number of statistical units classified as non-respondents	1 283	1 059
Number of cases where sample register information was wrong and response could not be used	12	28
Number of questionnaires used in analysis	218	250

SWEDEN

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Vehicle Register, the Commercial Traffic Register and kilometre data

Name of organisation who maintains the register:

National Road Administration (NRA) and The Swedish Motor Vehicle Inspection Company

Frequency of update: Daily

Frequency of access to draw the samples: Once a quarter

Arrangements for accessing the register:

The data are forwarded from the NRA and The Swedish Motor Vehicle Inspection Company to Statistics Sweden at the specified dates of deliveries. The dates are for sampling according to:

- First quarter 2007: 15 November 2006
- Second quarter 2007: 31 January 2007
- Third quarter 2007: 30 April 2007
- Fourth quarter 2007: 15 August 2007

The corresponding dates have been used for each survey year. The early dates of access for each quarter are stipulated in order to make up the sampling frame, draw a sample, giving a label to the questionnaires and sending out the forms in due time before the measurement week.

Information obtained from the register:

The information obtained from the Vehicle Register is most of the information registered on a specific vehicle. As an example, it can be mentioned that the identification as registration number, organisation number of the enterprise/owner of the vehicle, name and address, body code, year of first registration, vehicle in use/not in use; plus the information is used in the stratification as follows:

- County codes where the vehicle is registered are used to get the NUTS 2 -level codes together with

- Total weight and the service weight of the vehicle. The difference between those two concepts - maximum load capacity-, is used in the stratification.

The information from the Commercial Traffic Register is mainly number of permits for international traffic, geographical location and name, address of the enterprise that hold the permits.

The driving distances are collected from the Swedish Motor Vehicle Inspection Company and are used in the stratification.

Procedure for reminders:

A standard routine for reminders is used. When one week and 2 days have elapsed after the due date, reminder 1 is sent out by post. If no answer is received, reminder 2 will be sent after another week, also by post.

After another week again, a third reminder performed by telephone, is introduced for a number of the respondents in order to reduce the non-response.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Some body type codes for which transport of goods is not possible, such as ambulances, hearses, breakdown lorries. Military vehicles are not included in the 'Vehicle register'. Lorries 30 years and older are excluded. Lorries with maximum permissible laden weight under 3.5 tonnes are excluded.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

Stratified sampling has been used. The population is divided into two parts, national (lorries where the owner *do not have* permit for international traffic) and international (lorries where the owner *do have* permit for international traffic).

<u>*National:*</u> The sampling frame was created with information on each lorry regarding: driving distance according to the yearly inspections at the Swedish Motor Vehicle Inspection Company, county of registration, maximum load capacity. Two kinds of body codes related to Round timber transport resp. petroleum transport were created as strata with no information of counties and maximum load capacity accounted for. The first step of stratification was to divide the frame into four groups of body codes, namely:

- Round timber-lorries (code 66)
- Petroleum-transporting lorries (code 44)
- The rest with data about driving distance
- Lorries without data about driving distance.

For group 1 and 2 the second step was to divide the lorries into four groups according to their driving distance. Eight strata were created.
For group 3 above the division continued by the 8 NUTS areas in Sweden and a special group for Gotland. Every area class was divided into three groups of driving distance except Gotland that was divided into two groups. For the smallest driving group class (except Gotland) a further division was made according to maximum load. This gave a total of 43 strata.
For the lorries without data about driving distance, group 4, no further grouping was done.

<u>*International:*</u> The sampling frame was created with information on each lorry where the owner has a permit for international traffic regarding number of permits of the owner. The owners with a high number of permits, 16 or more, then had to answer a questionnaire about future use of their lorries. The lorries that mostly were going to be used for international traffic were separated into a stratum of their own. The others were divided by driving distance and region (groups of counties). This gave a total of 14 strata.

The entire survey gave 57 strata.

The strata concerning national traffic are made up of five digits; the first two separates round timber lorries (code 44), petroleum-transporting lorries (code 66), lorries used for national transporting (code 88), the third digit shows region (code 00-09), the fifth digit shows classes of driving distances (code 0,1,2,3).

The strata concerning international traffic are also made up of five digits; the first two are indicating international strata (code 99), the third digit indicate region (code 01-06), and the fifth digit shows classes of driving distances (code 0,1,2,3).

Two special strata numbers are used for lorries without information about driving distances, national traffic code 88000 and international traffic 99000. The lorries that are used most in international traffic (80 % or more) according to a special survey are coded as 99999.

Recording of journey data sent to Eurostat:

Single stop: The respondent is allowed to record the main type of goods if there are several types of goods. Otherwise the respondent will record mixed goods for such a journey.

Multi stop: Multi-stop journeys are coded by consignments. The respondent records each basic transport operation in the questionnaire. These records are then recalculated to journey level by the staff at Statistics Sweden. The method used can be described as follows: The kilometres driven for the total journey is calculated, the main type of goods (in respect of kilos) is decided and then a formula (see below) recalculate the average weight on the journey level. The exact figures in kilos are used in the calculations.
A / B = C
A = Tonne-kilometres for each basic transport operation is calculated and summed up
B = Kilometres driven on the journey
C = Average tonnes for the journey

Tonne-kilometres will be the same regardless of which file, A2 or A3, that is used for their calculation.

Regarding journey type 2 (multi-stop-journeys), we use the principle that if a trailer was used for the first consignment of the journey a trailer was used for the entire journey.

Collection/delivery: In the Swedish survey we allow the respondents to decide if the journey can be seen upon as a collection and/or distribution round (c/d). If the journey consists of five or more stops the respondent is allowed to give information on the journey as a whole. The usual cases are for example deliveries of petrol and oil or rounds for collection of milk. The respondent is asked to indicate the c/d-round with an "X" in the questionnaire. If the journey is considered as a c/d-round the respondent is asked to indicate the *average* weight for the c/d as a whole, the total kilometres driven during the c/d and the main commodity group. In the instructions to our respondents it is stated that the c/d-round is considered to start at the first loading point and finished at the last unloading point. This means that the possible empty leg must be recorded as a separate journey before and/or after the c/d-round. In the cases where the vehicle only has c/d-rounds and empty journeys during the survey week it is possible to connect the empty journeys to the c/d-rounds. If the vehicle has a mix between c/d-rounds and other kinds of journeys, not empty journeys, the connection is not possible at the moment. The information from the Swedish survey in the A2 file and the A3 file is the same regarding type 3 journeys.

Other variables: Regarding trailers we allow the respondent to record the most common trailer or combination of trailers used during the week for measurement. This is a change in the survey from the survey year 2002.

Calculation of weighting factors:

In the cases of 100% response:

Weighting factor = $13 * \frac{N}{S}$

N = Number of vehicles in the register (in a stratum)

S = Number of questionnaires used in analysis (in A1 dataset)

Otherwise,

Weighting factor = $13 * \frac{N}{S + S'}$

S' = number of vehicle for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	56 158	56 935
Number of vehicles selected for initial sample and questionnaires dispatched to vehicle owners	12 236	12 240
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	1 834	1 943
Number of cases classified as non-respondents	3 311	3 031
Number of cases where sample register information was wrong and response could not be used	785	801
Number of questionnaires used in analysis	6 306	6 465

UNITED KINGDOM (National)

SAMPLING REGISTER USED FOR THE SURVEY

Name of register:

1. Driver Vehicle Licensing Agency for GB-registered vehicles
2. Driver Vehicle Licensing (NI) for Northern Ireland registered vehicles

Name of organisation who maintains the register: DVLA/DVL(NI)

Frequency of update: Ongoing

Frequency of access to draw the samples: Quarterly

Arrangements for accessing the register:

For GB-registered vehicles, a quarterly sample is provided by DVLA based on an agreed specification for the proportion of vehicles required in each stratum for the desired weekly sample.
For NI-registered vehicles, the sample is extracted and supplied on a weekly basis.

Information obtained from the register:

Gross plated weight, NUTS1 region of registration, propulsion code, wheel plan code, tax class, body type code and year of first registration; name and contact details of the owner.

Procedure for reminders:

A reminder system is used to chase non-respondents:

First reminder: a letter is send 2 days after the due back date, 10 days after the end of the survey period

Second reminder: a letter is sent recorded delivery 2 weeks after the first reminder

Third reminder: a telephone call is made 2 weeks after the second reminder

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Vehicles weighing less than 3.5 tonnes maximum permissible laden weight and certain vehicles with invalid body type codes e.g. street cleansing vehicles, ambulances, snow ploughs, etc.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

The sample is stratified according to vehicle type and traffic area.

1. Vehicle weight group:
   - Rigid: 3.5 to 7.5 t, 7.5 to 15t, 15 to 18t, 18 to 26t, over 26t
   - Articulated: 3.5 to 26t, 26 to 34t, 34 to 38t, 38 to 40t, over 40t

2. Government Office Region (NUTS1)
   - North East
   - North West

- Yorkshire & Humberside
- East Midlands
- West Midlands
- East of England
- London
- South East
- South West
- Wales
- Scotland
- Northern Ireland

Recording journey data sent to Eurostat:

Single stop: If a vehicle is carrying more than one type of goods the larger of the two consignments determines the type of goods carried. The weight is the sum of all the consignments for the journey.

Multi stop: We collect data for these journeys in the form of single transport operations but can identify that they are legs of a particular 2-4 stop journey. We provide separate A2 records, coded as journey type 1, because our system requires that the journey to consignment relationship is a 1 to 1 relationship.

Collection/delivery: As for a single stop journeys only the main type of goods code is used. Goods lifted is calculated as either the larger of weight of goods delivered and weight of goods collected if delivering and collecting the same goods or weight of goods delivered + weight of goods collected if delivering and collecting different goods. Tonne-kilometres are calculated as described in 6.5 of the manual.

Other variables: For Northern Ireland registered vehicles' activity, the domestic survey methodology is used for recording international activity. These journeys are coded on a consignment (goods operation) basis. On the A2 record an adjustment is made so that the total distance does not include double counting. The A3 distance is not adjusted to enable accurate estimates of tonne-kilometres for goods related variables.

Main figures	**Year 2005**	**Year 2006**
Total number of vehicles in the country	992 295	1 432 335
Number of vehicles selected for initial sample	19 943	18 539
Number of cases where no vehicle activity was recorded during the sampled period but the vehicle could be considered as part of the active stock	2 705	2 495
Number of cases classified as non-respondents	1 375	1 378
Number of cases where sample register information was wrong and response could not be used	2 467	2 209
Number of questionnaires used in analysis	13 391	12 444

UNITED KINGDOM (International)

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Internal IRHS database

Name of organisation who maintains the register: DfT's Road Freight Statistics Team

Frequency of update: Continuous

Frequency of access to draw the samples:

On-going as information is received from the Vehicle Operating and Standards Agency (VOSA).

Arrangements for accessing the register:

Information about new international HGV licences and changes to existing international licences is obtained from VOSA's 'Application and Decisions' licence notification publications.

Information obtained from the register:

Details of firms operating heavy goods vehicles involved in international journeys. Firms provide information about their fleet size and number of international trips; these are used in the stratification of the sample.

Procedure for reminders:

A reminder system is used to chase non-respondents:
First reminder: a letter is sent 3 weeks after the due back date
Second reminder: a letter is sent recorded delivery 3 weeks after the first reminder
Third reminder: a telephone call is made 4 weeks after the second reminder

SAMPLING METHODOLOGY

Statistical unit: Transport firms with international operator's licences

Types of units excluded:

Organisations not holding, or not requiring international licences (e.g. armed forces) are excluded from the survey

Time unit:

Time periods differ according to size of firm:

Size 1: 1 day every 4 weeks
Size 3: 3 days every 12.5 weeks
Size 6: 1 week every 25 weeks
Size 12: 2 weeks every 50 weeks
Size 24: 4 weeks every 100 weeks

Time unit of quarter 1 of 2007 included in the survey: All (13 weeks)

Stratification:

The sample is stratified according to the size of the firm:

Size 1: 1000+ trips a year
Size 3: 401-1000 trips a year
Size 6: 101-400 trips a year

Size 12: 25-100 trips a year

Size 24: less than 25 trips a year

Recording of journey data sent to Eurostat:

Multi stop: No multi-stop journeys are coded in International road transport.

Collection/delivery: No collection / delivery journeys are coded in International road transport.

Other variables: For grossing purposes it is assumed the number of UK vehicles using a particular ferry route / channel tunnel is the same for inward and outward movements.

Calculation of weighting factors:

Data from the survey is stored as round trips. Grossing is by reference to population figures for international journeys obtained from the survey of goods vehicles leaving the UK by ferry or via the Channel Tunnel.

Grossing factors are calculated quarterly for each route out of the UK as

$$\text{Weighting factor} = \frac{P}{K}$$

P = Population figure for given route

K = number of sample trips leaving the UK via that route

Main figures	**Year 2005**	**Year 2006**
Total number of statistical units (enterprises) in the country	3 592	3 570
Number of statistical units selected for initial sample	3 049	2 530
Number of cases where no activity was recorded by the enterprise during the sampled period	1 582	1 197
Number of cases classified as non-respondents	98	125
Number of cases where sample register information was wrong and response could not be used	767	479
Number of questionnaires used in analysis (some enterprises are sampled more than once in a year)	3 816	3 590

LIECHTENSTEIN

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: National vehicle register

Name of organisation who maintains the register: Motorfahrzeugkontrolle MKF (Office of Motor Vehicles)

Frequency of update: Once a quarter

Frequency of access to draw the samples: Once a quarter

Arrangements for accessing the register:

There is a direct access to the database of the national vehicle register and to the business register for NACE codes.

Information obtained from the register:

Vehicle registration mark; ID of operator of vehicle; Name of operator of vehicle; Address of operator of vehicle; Nace-Code of operator; Type of vehicle (lorry, road tractor, trailer); Type of lorry; Brand name of Vehicle; Date of first registration; Number of axles; Maximum permissible weight; Maximum permissible weight of vehicle and trailer; Empty weight of the vehicle; Maximum loading capacity; Chassis number.

Procedure for reminders:

A reminder system is used to chase non-respondents:

First written reminder to the owner of the vehicle: 2 weeks after the deadline when the questionnaire was due to be returned.

Second written reminder to the owner of the vehicle: 4 weeks after the deadline when the questionnaire was due to be returned.

Third reminder to the owner of the vehicle (phone call): 6 weeks after the deadline when the questionnaire was due to be returned.

Afterwards, every two weeks there is a phone call to the owner of the vehicle.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Lorries and vans with maximum permissible weight of less than 6000 kg.

Due to the EEA treaty, all vehicles operating only in Liechtenstein and Switzerland are not recorded.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: 6 weeks

Stratification:

The population is stratified in two separate classes of vehicles:

- Class 1: Road tractors and lorry with or without trailer
- Class 2: All other vehicles

Recording of journey data sent to Eurostat:

Single stop: Transport operators are required to fill in as many lines of the questionnaire as different commodity groups are transported.

Multi stop: Multi-stop journeys are coded by consignments. Up to 5 stops are recorded and transport operators are required to fill in as many lines of the questionnaire as different commodity groups are transported.

Collection/delivery: Transport operators fill in only one line for a pick-up or a distribution round mentioning the first and the last place of loading/unloading and the number of loading/unloading operations.

Calculation of weighting factors:

$$\text{Weighting factor} = 13 * \frac{N}{S + S'}$$

N = number of vehicles in the register (in a stratum)

S = number of questionnaires used in analysis (in A1 dataset)

S'= number of vehicles for which no activity was recorded, but vehicles could be considered as active. (holiday, no work, etc.)

Estimation of maximum permissible laden weight:

The maximum permissible laden weight is calculated from the maximum loading capacity of the trailer, the maximum loading capacity of the lorry, and the maximum permissible weight of lorry and trailer.

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	291	244
Number of statistical units selected for initial sample and questionnaires dispatched to vehicle owners (some enterprises are sampled more than once in a year)	310	359
Number of cases where no activity was recorded by the enterprise during the sampled period	22	39
Number of cases classified as non-respondents	1	0
Number of cases where sample register information was wrong and response could not be used	10	10
Number of questionnaires used in analysis	277	310

NORWAY

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: The register of Vehicles

Name of organisation who maintains the register: The Directorate of Public Roads

Frequency of update: Daily

Frequency of access to draw the samples: Once a quarter

Arrangements for accessing the register:

The data are forwarded from the Directorate of Roads to Statistics Norway at specified dates of deliveries:

- First quarter 2007: November 2006
- Second quarter 2007: February 2007
- Third quarter 2007: May 2007
- Fourth quarter 2007: August 2007

The dates are approximately the same for each survey year. The early dates of access for each quarter are stipulated in order to make up the sampling frame, draw a sample, giving a label to the questionnaires and sending out the forms in due time before the survey period.

Information obtained from the register:

Vehicle Register records most of the information registered on a specific vehicle, about 50 variables. In addition, information about the owner of the vehicle and about the registration of the vehicle are collected.

Used in stratification: Age of vehicle, type of vehicle, region in Norway.

From the Commercial Traffic Register is collected information on number of permits for international traffic, geographical location and name and address of the enterprise that hold the permits. These information are used to allocate lorries to an international stratum

Procedure for reminders:

First reminder: One week after the due date, a reminder is sent to all those who have not responded. The letter has information about the consequences of not responding and gives a new due date one week later.

Second reminder: One week after the due date set in the reminder, a new letter is sent to those who still not have answered, telling that they must respond within a new due date one week later to avoid the compulsory fine.

Third reminder: Eight weeks after the deadline on the last letter, those who have still not responded are reported to the Norwegian National Collection Agency that fines them.

The response rate after reminders is approximately 94 per cent. This is when cases where vehicle has been sold/scrapped or where questionnaire has been returned due to address- or register errors, have been excluded. Approximately 84 per cent of the questionnaires are being used in the analysis. We find this adequate.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Vehicles more than 30 years old, vehicles with a carrying capacity of less than 3.5 tonnes, and vehicles with a total weight of 35 tonnes or more are excluded.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: 13 weeks

Stratification:

The population is divided into two parts: national (lorries where the owner do not have permit for international traffic) and international (lorries where the owner do have permit for international traffic).

International strata are defined as all lorries belonging to an enterprise which have an EU-licence for travelling abroad (since the license is not directly connected to a separate lorry, it is not possible to identify all the lorries that are used for international transport. That is why we perform that extra data collection mentioned in the end of item 1).

The population of lorries in the national superstratum is stratified by region (4 regions), group of vehicle (6 groups) and age (2 age groups).

In the international superstratum, there are 4 regions, only 4 groups of vehicle and no stratification on age.

New lorries and large lorries are overrepresented in the sample.

Recording of journey data sent to Eurostat:

Single stop: In case more than one type of commodity is transported, the respondent is allowed to record it as mixed goods.

Multi stop: Multi-stop journeys are coded by consignments.

Collection/delivery: Respondents are allowed to decide if the journey can be seen upon as a collection and/or distribution round (c/d).

If the journey consists of five or more stops the respondent is allowed to give information on the journey as a whole.

If the journey is considered as a c/d-round the respondent is asked to indicate the average weight for the c/d as a whole, the total kilometres driven during the c/d and the main commodity group.

In the instructions to our respondents it is stated that the c/d-round is considered to start at the first loading point and finished at the last unloading point.

Calculation of weighting factors:

In 5 steps,

First step: a non-response model is used to correct the bias due to non-response. The stratification is taken into account. Weights are made to gross up results from the usable questionnaire to the sample.

Second step: the weights computed in step 1 are combined with the sample drawing. The sample is then grossed up to national level.

Third step: the weights from step 2 are calibrated against the updated population from the survey quarter. This enables to get the correct amount of vehicles in National and International strata broken divided by regions, vehicle class and type of transport. As the information supplied by the vehicle owner is only for one specific week in the surveyed quarter, the calibrated weights are multiplied by 13.

Fourth and fifth step: an adjustment of this weight is applied to correct under reporting. This adjustment is made by one factor for each of the six groups for the age of the vehicle (three groups) and type of transport (two groups).

As from 1 quarter 2006 we also calibrate the results for the international survey against data on export and import from the External trade statistics (step 5).

Estimation of maximum permissible laden weight:

The maximum permissible laden weight is estimated by computing the average of maximum permissible laden weight values for lorries having the same vehicle classification.

Main figures	**Year 2005**	**Year 2006**
Total number of relevant goods vehicles in the country	36 780	37 088
Number of statistical units selected for initial sample and questionnaires dispatched to vehicle owners (some enterprises are sampled more than once in a year)	9 780	9 593
Number of cases where no activity was recorded by the enterprise during the sampled period	2 635	2 653
Number of cases classified as non-respondents	416	536
Number of cases where sample register information was wrong and response could not be used	1 148	821
Number of questionnaires used in analysis	5 581	5 583

SWITZERLAND

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Motor Vehicle Register

Name of organisation who maintains the register: *S*wiss Federal Roads Office (FEDRO)

Frequency of update: Once a week

Frequency of access to draw the samples: Once a week

Arrangements for accessing the register:

Application for a weekly extraction of the register at FEDRO.

Information obtained from the register:

Name, address, registration number, number of seats, type of vehicle, type of body, type designation of vehicle, load capacity, maximum permissible laden weight, date of first registration of the vehicle, existence or not of a loading crane, existence or not of a hydraulic lift, existence or not of a cable winch, existence or not of a trailer coupling, tank volume (cistern volume), number of axles, code for actual registration status, license plate number, profession of owner/business of transport firm.

Procedure for reminders:

A first reminder is sent 14 days after the deadline. A second reminder is sent 14 days after the deadline of the first one.

For both reminders, all material is sent again (questionnaire, letter, instructions).

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Vehicles with a maximum permissible laden weight less than 3500 kg and special vehicles (e.g. agricultural tractors, fire engines, military vehicles) are excluded.

Time unit: 1 week

Time unit of quarter 1 of 2008 included in the survey: 13 weeks

Recording of journey data sent to Eurostat:

Single stop: All commodity types transported on a vehicle are recorded.

Multi stop: Information is collected on the basis of a description of each basic goods transport operation (with additional details on unladen journeys).

Collection/delivery: The transported goods weight is assumed to increase/decrease steadily between the first and last stop of collection/delivery (0.5 * goods weight * distance).

Main figures: Not available

CROATIA

SAMPLING REGISTER USED FOR THE SURVEY

Name of register: Register of Motor Vehicles

Name of organisation who maintains the register: Ministry of Interior

Frequency of update: Once a quarter

Frequency of access to draw the samples: Once a quarter

Arrangements for accessing the register:

Ministry of Interior transmits part of the register with all motor goods vehicles once a quarter in compliance with the Annual Implementation Plan of Statistical Activities. After receiving the data on registered vehicles, the Department for Programming creates a database with necessary data and than pairs up the data with the Register of Business Entities and other consulting databases in order to take over addresses and other data on vehicles owners and their activity.

Information obtained from the register:

Register of motor vehicles: Registration number, type of vehicle, body type, main use of vehicle, mark of vehicle, made in year, load capacity, maximum permissible weight, name and address of owner of vehicle, number of axles, type of the owner.

Register of Business Entities: Main activity of the operator.

Used in stratification: Load capacity

Procedure for reminders:

First reminder: 10 days after the reference period together with the questionnaire

Second reminder: Telephone call 18 days after the reference period

Average response rate for quarter 1 of 2007 is 75.8% and this response rate is hardly sustainable.

SAMPLING METHODOLOGY

Statistical unit: Tractive vehicle

Types of units excluded:

Types of units excluded: vehicles with load capacity less than 3500 kg, agricultural vehicles, military and public service vehicles, special purpose vehicles such as truck cranes, garbage trucks, museum vehicles, library vehicles, moving workshop vehicles, etc.

Time unit: 1 week

Time unit of quarter 1 of 2007 included in the survey: 13 weeks

Stratification:

Strata were defined with loading capacity (4 classes: 3.50 - 4.99; 5.00 – 9.99; 10.00 and more tonnes; road tractors).

The sample for each stratum was chosen by a systematic random method. The systematic selection made it possible to do the implicit stratification by county and type of owner (tradesman, enterprise). Moreover, in that way, it was also possible to achieve a better geographical dissemination of the sample. The unbiased Horvitz-Thompson assessor was used in the method.

Recording of journey data sent to Eurostat:

Single stop: In case more than one type of goods commodity is carried, only the one, with the highest weight is taken into consideration.

Multi stop: In case more than one type of goods commodity is carried, only the one, with the highest weight is taken into consideration.

Collection/delivery: In case more than one type of goods commodity is carried, only the one, with the highest weight is taken into consideration.

Calculation of weighting factors:

$$\text{Weighting factor} = 13 * \frac{N}{S + S'}$$

N = number of vehicles on the register (in a stratum)

S = number of questionnaires used in analysis (in A1 dataset)

S' = number of vehicles for which no activity was recorded, but vehicles could be considered as active (holiday, no work, etc.)

Main figures: Not available

PART B

Summary tables

Table 1 – Scope of surveys

Survey	Sampling base		Vehicle types not covered		
	Register of tractive vehicles maintained by the NSI or national organisations (1)	**Other**	**Agricultural, military and public service vehicles**	**Vehicles over or below certain limits**	**Other vehicles not covered**
Belgium	yes		yes		Vehicles not destined to the transport of goods
Bulgaria	yes		yes	Vehicles < 6t MPLW	Vehicles with dimensions exceeding permitted limits of the country
Czech Republic	yes		yes	Vehicles < 2t LC	
Denmark	yes			Vehicles < 6t MPLW (national) Vehicles < 6t MPLW belonging to the enterprise (international)	
Germany	yes		yes	Lorries ≤ 3.5t LC	Vehicles not destined to the transport of goods; Vehicles not used for goods transport on public roads (own account only)
Estonia	yes			Lorries < 3.5t LC Vehicles > 25 years	Vehicles not destined to the transport of goods
Ireland	yes			Vehicles < 2t unladen weight	
Greece	yes		yes	Vehicles <3.5t LC and < 6t MPLW	
Spain	yes		yes	Vehicles <3.5t LC and < 6t MPLW	Special vehicles needing a special registration number and vehicles not destined to the transport of goods
France	yes		yes	Lorries > 32.5 t LC, tractors > 44.5 t. Vehicles < 3.5 t weight	Special purpose vehicles

Survey	Sampling base		Vehicle types not covered		
	Register of tractive vehicles maintained by the NSI or national organisations (1)	**Other**	**Agricultural, military and public service vehicles**	**Vehicles over or below certain limits**	**Other vehicles not covered**
				Vehicles > 15 years	
Italy	yes	Tax vehicle register from the Ministry of Economy and Finance	yes	Vehicles < 3.5 t LC Vehicles > 11 years	
Cyprus	yes			Vehicles < 3 t LC (national transport only)	
Latvia	yes				Special purpose vehicles
Lithuania		State enterprise 'Regitra'		Vehicles < 6t LC	Special purpose vehicles
Luxembourg	yes		yes	Vehicles < 3t LC	Special purpose vehicles
Hungary	yes		yes	Vehicles < 3.5t LC	Special purpose vehicles
Malta	yes		yes		
Netherlands		SIEV, NIWO and RDW		Vehicles < 2t LC	Vehicles not used for goods transport on public roads (Own account only)
Austria	yes		yes	Vehicles < 2t LC	Fire brigade, private household, exterritorial organisation
Poland	yes		yes	Vehicles ≤ 3.5t MPLW Vehicles > 25 years	Special purposes vehicles
Portugal	yes		yes	Vehicles ≤ 3.5t MPLW	Vehicles not destined to the transport of goods
Romania	yes			Vehicles < 3.5 LC	
Slovenia	yes		yes	Vehicles < 1t LC (2001-2003) Vehicles < 1.5t LC (since 2004) Vehicles < 2t LC (since 2006)	
Slovakia	yes				
Finland		National: Vehicle Administration Centre International: County government of OULU (only firms with a license are covered)	yes	Lorries < 3.5t MPLW (national transport only)	Special purpose vehicles

Survey	Sampling base		Vehicle types not covered		
	Register of tractive vehicles maintained by the NSI or national organisations (1)	**Other**	**Agricultural, military and public service vehicles**	**Vehicles over or below certain limits**	**Other vehicles not covered**
Sweden		National Road Administration and The Swedish Motor Vehicle Inspection Company	yes	Vehicles > 30 years Vehicles ≤ 3.5t MPLW	Special purpose vehicles
United Kingdom		National: Driver Vehicle Licensing Agency for GB-registered vehicles and Driver Vehicle Licensing for Northern Ireland registered vehicles International: Traffic area database (only firms with a license are covered)		Vehicles < 3.5t MPLW (national transport only)	Special purpose vehicles
Liechtenstein		Office of Motor Vehicles		Vehicles < 6t MPLW	Vehicles operating in LI and CH only
Norway		Directorate of Public Roads		Vehicles > 30 years Vehicles < 3.5 t LC Vehicles > 35 MPLW	
Switzerland		Swiss federal Roads Office	yes	Vehicles < 3.5t LC	
Croatia	yes		yes	Vehicles < 3500 LC	Special purpose vehicles

(1) Ministry of Transport or other national organisations.

Table 2 – Simplifying assumptions used in recording journey data

	Simplifying assumption			
	Single stop journey	**Multi stop journey**	**Collection/Delivery**	**Other variables**
Belgium	Tkm=Tonnes*km/2	Tkm=Tonnes*km*2/3	None	None
Bulgaria	Respondents can record only one type of goods, i.e. goods of largest weight	Multi-stop journey are recorded by vertical stages		
Czech Republic	Respondents can record only one type of goods, i.e. goods of largest weight	Multi-stop journey are recorded by consignments	None	None
Denmark (National)	We assume that a laden journey of type 1 carries only one type of commodity. If more types of goods are transported and one type of goods is dominating (more than 66%) the dominating one is used for the coding. If no type of goods is dominating the class 24 (miscellaneous) is used	In the Danish survey on national transport of goods by road laden journeys are either of type 1 (single stop) or of type 3 (collection/delivery)	Tkm=0.5*tonnes loaded * journey length	None
Denmark (International)	We assume that a laden journey of type 1 carries only one type of commodity. If more types of goods are transported and one type of goods is dominant (more than 66%) the dominant one is used for the coding. If no type of goods is dominant the class 24 (miscellaneous) is used	Multi-stop journey are recorded by consignments. For multi stop journeys each transport operation is reported. The journey data are derived from the goods data	Journeys of type 3 (collection/delivery) are not accepted in the Danish survey of international transport. Such – rare - journeys are reported as multi stop journeys or as an artificial single stop journey	None
Germany	If on a type 1 journey (single stop) several different types of goods are transported, the type of goods with the uppermost weight is reported in data set A3	Multi-stop journey are recorded by vertical stages. In case of a multi-stop-journey in data set A3 the various stops (points of loading and/or unloading) and the load transported from one point to the next stop are reported. In case several different types of goods are transported, the type of goods with the uppermost weight at a time is reported	These are journeys up to 30 km distance and several points of loading and/or unloading. With the aim to reduce the burden of statistics the respondent is not asked for details of all the stops but the number of stops	In case of journeys where the vehicle operates as a shuttle between one point of loading and one point of unloading the single journeys are reported as laden journeys (journey type 1) or empty journeys (journey type 4).

	Simplifying assumption			
	Single stop journey	**Multi stop journey**	**Collection/Delivery**	**Other variables**
Estonia	If more than one goods commodity is carried, it is coded as "mixed goods" type 24. If mixed goods are selected, then goods loading type is set according to good with highest weight (kilograms)	Multi-stop journey are recorded by vertical stages. Same as for single stop journey	Same as for single stop	We assume that within one journey only one commodity is carried
Ireland	The data entry system can only take one goods type code so if there is more than one type of goods carried on the journey then the commodity will be recorded as a mixed load	Multi-stop journey are coded by consignments. The data entry system can only take one origin & destination for a journey. The origin and destination, number of collection stops & weight of goods collected and number of delivery stops & weight of goods delivered are recorded. There is no facility to enter tonne-kilometres on the data entry system so tkm are calculated using formulas	The data entry system can only take one origin & destination for a journey. The origin and destination, number of collection stops & weight of goods collected and number of delivery stops & weight of goods delivered are recorded. There is no facility to enter tonne-kilometres on the data entry system so tkm are calculated using formulas	None
Greece	Respondents can record only one type of goods, i.e. goods of largest weight	Multi-stop journeys are coded by consignments	For short distance journeys of type 3 with more than five points of loading and/or unloading, the respondent is not asked for the details of all the stops, but about the number of stops, the distance travelled loaded/unloaded, the total weight transported and the main type of good (as in type 1)	None
Spain	None	Multi-stop journeys are coded by consignments	Without points of loading and/or unloading of the goods, Tkm = maximum tonnes*kilometres/2 Only the main type of goods is requested (but all the tonnes)	None
France	None	Multi-stop journeys are coded by consignments	In the recording of type 3, we describe one basic transport operation with the total weight of goods (A3.2 in table A3) and the total length of the	None

	Simplifying assumption			
	Single stop journey	**Multi stop journey**	**Collection/Delivery**	**Other variables**
			journey (A3.7 in table A3). To calculate the number of tonne-kilometres, we multiply the total weight of goods by the total length of the journey and divide the result by 2, which gives the same result as if the vehicle had been unloading uniformly throughout the journey.	
Italy	When in a laden journey several types of goods are transported we ask the hauliers to describe only the main one	To date the staff is able to restructure the details provided by the hauliers on the questionnaire; so the original journey often is restructured into several one stop journey	We ask the respondent to describe for ex: collection rounds under a simplified scheme: total loaded distance travelled, total weight of goods collected, total weight of goods delivered, origin, final destination	For dataset A1 "the vehicle related variables" are connected to the configuration at the beginning of the first laden journey made during the survey week: no successive configurations are recorded
Cyprus (National)	Only the commodity with the highest weight is taken into account	For the calculation of tonnes* km the sum of weight received plus the weight delivered multiplied by the distance covered is divided by 1500	For the calculation of tonnes* km the sum of weight received plus the weight delivered multiplied by the distance covered is divided by 2000	None
Cyprus (International)	Only the commodity with the highest weight is taken into account	This type of journey does not take place in International Road transport	This type of journey does not take place in International Road transport	None
Latvia	None	Multi-stop journey are recorded by vertical stages	None	None
Lithuania	Respondents can record only one type of goods, i.e. goods of largest weight	Multi-stop journeys are coded by consignments. Respondents can record only one type of goods, i.e. goods of largest weight	None	None
Luxembourg	*n.a.*	*n.a.*	*n.a.*	*n.a.*
Hungary	If more than one goods commodity is carried, only the commodity with the highest weight is taken into account	Multi-stop journeys are coded by vertical stages. In the calculation for the multi stop journeys, the total weight is the sum of weights loaded at each stop	None	None
Malta	*n.a.*	*n.a.*	*n.a.*	*n.a.*

	Simplifying assumption			
	Single stop journey	**Multi stop journey**	**Collection/Delivery**	**Other variables**
Netherlands (Own account and Hire or Reward)	Sometimes a simplification is made by the enterprise. In case the weight of a national shipment is below 1 tonne, the enterprises can combine several shipments. For international transport this can be done in case a shipment is smaller than 5 tonnes	Multi-stop journeys are coded by vertical stages. The same procedure as for single stop journeys.	The place of loading is the centre in which most loadings have taken place (highest density). The place of unloading is the centre in which most unloadings have taken place (highest density). In case of an international journey with stops in more different countries, for every country at least one shipment should be given	None
Austria	None. Transport operators are required to fill in as many lines of the questionnaire as different commodity groups are transported	Multi-stop journeys are coded by consignments. The used record structure contains a fixed part (vehicle data) and n variable parts for n basic operations in the course of one laden journey	Transport operators fill in only one line for a pick-up or a distribution round mentioning the first and the last place of loading/unloading and the number of loading/unloading operations	None
Poland	Transport operators are requested to give only one main type of goods (dominant considering the weight of goods)	Multi-stop journeys are coded by consignments. For each place of loading can be loaded only one main type of goods which is dominant considering the weight of the goods. In the recording of type 2 journeys more than one type of goods can be carried. Goods are unloaded according to the method FIFO (first type of goods which is loaded is first unloaded)	The transport operators give only the first and last place of loading/unloading and the number of stops. The type 3 journeys are recorded only for national transport. The weight of goods and tonnes-kilometres are calculated according to the formulae: Weight of goods (A2.2) = weight of goods (A3.2) Tonnes-km = ∑(A3.2 * A3.7)/20 where: A3.2 – weight of goods, A3.7 – distance travelled	The axle configuration of vehicle and the type of transport are recorded as the most frequently-used during the survey week
Portugal	Transport operators are requested to give only one main type of goods (dominant considering the weight of goods).	Multi-stop journeys are coded by consignments. This type of journey is considered when there is more than one goods commodity being carried or several stops during the journey. When the answer implies	This type of journey is considered whenever there is a collection/delivery of goods with an unrecorded number of stops with short distances separating them.	

	Simplifying assumption			
	Single stop journey	**Multi stop journey**	**Collection/Delivery**	**Other variables**
		several stops, we try to simplify the journeys and transform them into type 1 journeys, for instance, if the vehicle becomes empty we consider a new road freight transport operation		
Romania	For journeys with more than one commodity, only one record is created	Multi-stop journeys are recorded by vertical stages	None	None
Slovenia	Only the main type of goods carried is recorded.	Multi-stop journeys are coded by consignments. Only the main type of goods carried is recorded.	Only the main type of goods carried is recorded.	In case of usage of more than one trailer in the surveyed week, only information on the trailer used in majority of cases is collected
Slovakia	Each type of transported goods is surveyed separately within the journey	Multi-stop journeys are coded by consignments. Each type of transported goods is surveyed separately within the journey	None	None
Finland (National)	The commodity class of the goods that has the biggest weight is being used	Multi-stop journeys are coded by consignments. The first place of loading for the goods and the last place of unloading of the goods are being used. The weight of goods is reported when biggest during the journey	If there are more than 4 stops for loading/unloading during the journey, journey is classified as a collection or distribution journey. The first place of loading of the goods and the last place of unloading is being used. The weight of goods is reported when the biggest during the journey. Tkm are divided by 2	None
Finland (International)	None	Multi-stop journeys are coded by consignments	None	None
Sweden	The respondent is allowed to record the main type of goods if there are several types of goods. Otherwise the respondent will record mixed goods for such a journey	Multi-stop journeys are coded by consignments. The respondent records each basic transport operation in the questionnaire. These records are then recalculated to journey level by the staff at Statistics Sweden. The method used can be	In the Swedish survey we allow the respondents to decide if the journey can be seen upon as a collection and/or distribution round (c/d). If the journey consists of five or more stops the respondent is allowed to give information on the journey as a whole. The	Regarding trailers we allow the respondent to record the most common trailer or combination of trailers used during the week for measurement. This is a change in the survey from the survey year 2002.

	Simplifying assumption			
	Single stop journey	**Multi stop journey**	**Collection/Delivery**	**Other variables**
		described as follows: The kilometres driven for the total journey is calculated, the main type of goods (in respect of kilos) is decided and then a formula (see below) recalculate the average weight on the journey level. The exact figures in kilos are used in the calculations. A / B = C A = Tonne-kilometres for each basic transport operation is calculated and summed up B = Kilometres driven on the journey C = Average tonnes for the journey. Tonne-kilometres will be the same regardless of which file, A2 or A3, that is used for their calculation. Regarding journey type 2 (multi-stop-journeys), we use the principle that if a trailer was used for the first consignment of the journey a trailer was used for the entire journey.	usual cases are for example deliveries of petrol and oil or rounds for collection of milk. The respondent is asked to indicate the c/d-round with an "X" in the questionnaire. If the journey is considered as a c/d-round the respondent is asked to indicate the *average* weight for the c/d as a whole, the total kilometres driven during the c/d and the main commodity group. In the instructions to our respondents it is stated that the c/d-round is considered to start at the first loading point and finished at the last unloading point. This means that the possible empty leg must be recorded as a separate journey before and/or after the c/d-round. In the cases where the vehicle only has c/d-rounds and empty journeys during the survey week it is possible to connect the empty journeys to the c/d-rounds. If the vehicle has a mix between c/d-rounds and other kinds of journeys, not empty journeys, the connection is not possible at the moment. The information from the Swedish survey in the A2 file and the A3 file is the same regarding type 3 journeys	
United Kingdom (National)	If a vehicle is carrying more than one type of goods the larger of the two consignments determines the type of goods carried. The weight is the sum of all the consignments for the journey	We collect data for these journeys in the form of single transport operations but can identify that they are legs of a particular 2-4 stop journey. We provide separate A2 records, coded as journey type 1, because our system	As for a single stop journeys only the main type of goods code is used. Goods lifted is calculated as either the larger of weight of goods delivered and weight of goods collected if delivering and collecting the same goods or weight of	This survey collects international activity for Northern Ireland registered vehicle's activity. These journeys are coded on a consignment (goods operation) basis. On the A2 record an adjustment is made so that the

	Simplifying assumption			
	Single stop journey	**Multi stop journey**	**Collection/Delivery**	**Other variables**
		requires that the journey to consignment relationship is a 1 to 1 relationship	goods delivered + weight of goods collected if delivering and collecting different goods. Tkm are calculated as described in 6.5 of the manual	total distance does not include double counting. The A3 distance is not adjusted to enable accurate estimates of tkm for goods related variables
United Kingdom (International)	None	No multi-stop journeys are coded in International road transport	No collection / delivery journeys are coded in International road transport	For grossing purposes it is assumed the number of UK vehicles using a particular ferry route / channel tunnel is the same for inward and outward movements
Liechtenstein	Transport operators are required to fill in as many lines of the questionnaire as different commodity groups are transported	Multi-stop journeys are coded by consignments. Up to 5 stops are recorded and transport operators are required to fill in as many lines of the questionnaire as different commodity groups are transported.	Transport operators fill in only one line for a pick-up or a distribution round mentioning the first and the last place of loading/unloading and the number of loading/unloading operations	None
Norway	In case more than one type of commodity is transported, the respondent is allowed to record it as mixed goods	Multi-stop journeys are coded by consignments	Respondents are allowed to decide if the journey can be seen upon as a collection and/or distribution round (c/d). If the journey consists of five or more stops the respondent is allowed to give information on the journey as a whole. If the journey is considered as a c/d-round the respondent is asked to indicate the average weight for the c/d as a whole, the total kilometres driven during the c/d and the main commodity group. In the instructions to our respondents it is stated that the c/d-round is considered to start at the first loading point and finished at the last unloading point	None

	Simplifying assumption			
	Single stop journey	**Multi stop journey**	**Collection/Delivery**	**Other variables**
Switzerland	All commodity types transported on a vehicle are recorded	Information is collected on the basis of a description of each basic goods transport operation (with additional details on unladen journeys)	The transported goods weight is assumed to increase/decrease steadily between the first and last stop of collection/delivery (0.5 * goods weight * distance)	None
Croatia	In case more than one type of goods commodity is carried, only the one, with the highest weight is taken into consideration	In case more than one type of goods commodity is carried, only the one, with the highest weight is taken into consideration	In case more than one type of goods commodity is carried, only the one, with the highest weight is taken into consideration	

Table 3 – Sampling rate in space (of vehicles, firms), 2006

Survey	Statistical unit	Number of statistical units in the population	Number of statistical units in the sample	Sampling rate in space (%)
Belgium	Tractive unit	125 726	60 166	47.9
Bulgaria	Tractive vehicle	142 833	18 855	13.2
Czech Republic	Tractive vehicle	143 830	16 189	11.3
Denmark	Tractive vehicle (national)	44 463	3 536	8.0
	Transport firm (international)	1 086	2 351	216.5
Germany	Tractive vehicle	453 244	203 650	44.9
Estonia	Tractive vehicle	19 749	4 152	21.0
Ireland	Tractive vehicle	105 885	31 299	29.6
Greece	Tractive vehicle	79 869	6 696	8.4
Spain	Tractive vehicle	379 564	52 000	13.7
France	Tractive vehicle	594 621	91 940	15.5
Italy (2004)	Tractive vehicle	258 038	80 049	31.0
Cyprus	Tractive vehicle	11 569	1 612	13.9
Latvia	Tractive vehicle	151 121	6 240	4.1
Lithuania	Tractive vehicle	47 724	15 372	32.2
Luxembourg	Tractive vehicle	9 806	8 653	88.2
Hungary	Tractive vehicle	80 678	55 764	69.1
Malta	Tractive vehicle and transport firm	*n.a.*	*n.a.*	*n.a.*
Netherlands	Transport firm (own account and hire or reward)	*n.a.*	*n.a.*	*n.a.*
Austria	Tractive vehicle	72 743	26 000	35.7
Poland	Tractive vehicle	545 011	49 036	9.0
Portugal	Tractive vehicle	128 348	29 594	23.1
Romania	Tractive vehicle	170 151	36 479	21.4
Slovenia	Tractive vehicle	20 557	8 161	39.7
Slovakia	Tractive vehicle	102 993	10 400	10.1
Finland	Tractive vehicle (national)	79 445	8 400	10.6
	Transport firm (international)	5 862	2 400	40.9
Sweden	Tractive vehicle	56 935	12 240	21.5
United Kingdom	Tractive vehicle (national)	1 432 335	18 539	1.3
	Transport firm (international)	3 570	2 530	70.9
Liechtenstein *	Tractive vehicle	244	359	147.4
Norway	Tractive vehicle	37 088	9 593	25.9
Switzerland	Tractive vehicle	*n.a.*	*n.a.*	*n.a.*
Croatia	Tractive vehicle	*n.a.*	*n.a.*	*n.a.*

Note: n.a.: not available

* Some vehicles may be surveyed several times in the same quarter

The sampling rate in space figures (%) have been obtained by calculating as follows: “Number of statistical units in the sample” divided by “Number of statistical units in the population”.

Table 4 – Time-based sampling rate, 2007

Survey	Time unit	Number of time units in the year	Number of time units represented in the survey in the year	Time-based sampling rate (%)
Belgium*	week	52	52	1.92
Bulgaria	week	52	52	1.92
Czech Republic	week	52	52	1.92
Denmark	week (national) week for small enterprises and half week for other enterprises (international)	52 104	52 104	1.92 0.96
Germany	half week	104	104	0.96
Estonia	week	52	52	1.92
Ireland	week	52	52	1.92
Greece	week	52	52	1.92
Spain	week	52	52	1.92
France	week	52	52	1.92
Italy*	week	52	28	1.92
Cyprus	week (national) all journeys (international)	52	52	1.92
Latvia	week	52	52	1.92
Lithuania	week	52	52	1.92
Luxembourg*	week	52	28	1.92
Hungary	week	52	52	1.92
Malta*	3 days	121	0	0.82
Netherlands	week	52	52	1.92
Austria	week	52	52	1.92
Poland	week	52	52	1.92
Portugal	week	52	52	1.92
Romania	week	52	52	1.92
Slovenia	week	52	52	1.92
Slovakia	week	52	52	1.92
Finland	2 days (national) 1 or 2 weeks (international)	182 52 or 26	182 40	0.55 1.92 or 3.84
Sweden	week	52	52	1.92
United Kingdom	Week (national) Dependant on the firm size for international transport	52	52	1.92
Liechtenstein	week	52	24	1.92
Norway	week	52	52	1.92
Switzerland**	week	52	52	1.92
Croatia	week	52	52	1.92

* Time based sampling rate for 2004
** Time based sampling rate for 2008

The time-based sampling rate figures (%) have been obtained by calculating as follows: 100 divided by “Number of time units in the year”.

Table 5 – Global sampling rates (in space and in time)

Survey	Collection unit	Sampling rate in space (%)	Sampling rate in time (%)	Global sampling rate in space and in time (%)
Belgium*	Vehicle-week	47.9	1.92	0.92
Bulgaria	Vehicle-week	13.2	1.92	0.25
Czech Republic	Vehicle-week	11.3	1.92	0.21
Denmark	Vehicle-week (national)	13.0	1.92	0.25
Germany	Vehicle-half week	44.9	0.96	0.43
Estonia	Vehicle-week	21.0	1.92	0.40
Ireland	Vehicle-week	29.6	1.92	0.56
Greece	Vehicle-week	8.4	1.92	0.16
Spain	Vehicle-week	13.7	1.92	0.26
France	Vehicle-week	15.5	1.92	0.29
Italy*	Vehicle-week	*31.0*	1.92	0.59
Cyprus	Vehicle-week (national)	13.9	1.92	0.26
Latvia	Vehicle-week	4.1	1.92	0.08
Lithuania	Vehicle-week	32.2	1.92	0.62
Luxembourg*	Vehicle-week	88.2	1.92	1.69
Hungary	Vehicle-week	69.1	1.92	1.33
Malta*	Vehicle-week part	*n.a.*	0.82	*n.a.*
Netherlands	Transport firm-week (own account and hire or reward)	*n.a.*	1.92	*n.a.*
Austria	Vehicle-week	35.7	1.92	0.68
Poland	Vehicle-week	9.0	1.92	0.17
Portugal	Vehicle-week	23.1	1.92	0.44
Romania	Vehicle-week	21.4	1.92	0.41
Slovenia	Vehicle-week	39.7	1.92	0.76
Slovakia	Vehicle-week	10.1	1.92	0.19
Finland	Vehicle-week part (national)	12.7	0.55	0.07
Sweden	Vehicle-week	21.5	1.92	0.41
United Kingdom	Vehicle-week (national)	1.3	1.92	0.02
Liechtenstein	Vehicle-week	147.4	1.92	2.83
Norway	Vehicle-week	25.9	1.92	0.49
Switzerland	Vehicle-week	*n.a.*	*n.a.*	*n.a.*
Croatia	Vehicle-week	*n.a.*	*n.a.*	*n.a.*

Note: n.a.: not available

* Sampling rate in time for 2004

The global sampling rate figures have been obtained by multiplying the sampling rate in space by the sampling rate in time.

Attention must be drawn to the fact that the first figures refer to 2006, whereas the latter to 2007. The global sampling rate figures should thus be considered provisional, although the sampling rate in time is liable to remain constant for most countries from one year to the next.

Table 6 – Response rate

Survey	Response rate (in %)	
	2005	2006
Belgium	79.6	77.9
Bulgaria	*n.a.*	72.1
Czech Republic	93.7	93.4
Denmark	98.3	98.0
Germany	95.8	95.6
Estonia	73.5	67.1
Ireland	52.5	54.2
Greece	81.7	78.8
Spain	92.4	94.6
France	82.0	81.3
Italy	*n.a.*	*n.a.*
Cyprus	96.7	95.7
Latvia	88.8	88.9
Lithuania	76.2	75.7
Luxembourg	94.6	94.0
Hungary	87.4	86.4
Malta	*n.a.*	*n.a.*
Netherlands	*n.a.*	*n.a.*
Austria	97.4	99.0
Poland	85.3	85.3
Portugal	70.6	69.8
Romania	n.a.	97.4
Slovenia	80.0	79.0
Slovakia	86.4	85.5
Finland	62.7	63.9
Sweden	72.9	75.2
United Kingdom	93.1	92.6
Liechtenstein	99.7	100.0
Norway	95.7	94.4
Switzerland	*n.a*	*n.a*
Croatia	*n.a.*	*n.a.*

Note: n.a.: not available

The response rate is defined as the number of questionnaires dispatched minus those classified as non-response divided by the number of questionnaires dispatched, expressed as a percentage.

Table 7 – Register quality

Survey	Register quality (in %)	
	2005	2006
Belgium	76.6	75.5
Bulgaria	*n.a.*	44.5
Czech Republic	84.6	84.1
Denmark	90.6	90.1
Germany	94.3	95.0
Estonia	64.2	47.3
Ireland	76.6	75.0
Greece	84.9	86.5
Spain	78.5	76.1
France	72.6	70.8
Italy	*n.a.*	*n.a.*
Cyprus	93.3	94.1
Latvia	96.5	97.0
Lithuania	78.5	77.6
Luxembourg	100.0	100.0
Hungary	68.4	69.0
Malta	*n.a.*	*n.a.*
Netherlands	*n.a.*	*n.a.*
Austria	100.0	95.1
Poland	69.5	78.4
Portugal	81.3	81.9
Romania	*n.a.*	57.6
Slovenia	91.8	89.7
Slovakia	78.1	82.1
Finland	93.0	93.7
Sweden	91.2	91.3
United Kingdom	86.7	87.1
Liechtenstein	96.8	97.2
Norway	87.7	90.9
Switzerland	*n.a.*	*n.a.*
Croatia	*n.a.*	*n.a.*

Note: n.a.: not available

The register quality is defined as the number of usable questionnaires (i.e. number of questionnaires dispatched minus number of questionnaires classified as non-response minus number of questionnaires where sample register information was wrong) divided by the number of questionnaires dispatched minus those classified as non-response, expressed as a percentage.

Table 8 – Precision of results, in terms of Standard error (on total tonnes)

Survey	Standard error (tonnes), in %	
	2005	2006
Belgium	4.51	4.25
Bulgaria	*n.a.*	9.08
Czech Republic	3.26	3.24
Denmark	6.01	6.19
Germany	0.84	0.80
Estonia	12.32	8.55
Ireland	2.91	2.88
Greece	8.73	14.84
Spain	1.51	1.64
France	1.44	1.26
Italy	*n.a.*	*n.a.*
Cyprus	6.41	8.08
Latvia	7.01	5.94
Lithuania	11.75	12.97
Luxembourg	3.32	3.27
Hungary	2.13	2.11
Malta	*n.a.*	*n.a.*
Netherlands	*n.a.*	*n.a.*
Austria	3.33	2.18
Poland	3.60	3.72
Portugal	3.15	2.99
Romania	*n.a.*	3.97
Slovenia	5.89	6.28
Slovakia	4.97	5.01
Finland	7.64	6.95
Sweden	4.58	4.47
United Kingdom	1.91	2.06
Liechtenstein	7.76	5.60
Norway	4.78	5.41
Switzerland	*n.a.*	*n.a.*
Croatia	*n.a.*	*n.a.*

Note: n.a.: not available

Percentage standard error of estimate (95% confidence).

Reference: Commission Regulation 642/2004 on precision requirements for data collected in accordance with Council Regulation (EC) No 1172/98 on statistical returns in respect of the carriage of goods by road.

Table 9 – Precision of results, in terms of Standard error (on total tonne-kilometres)

Survey	Standard error (tonne-kilometres), in %	
	2005	2006
Belgium	3.26	4.25
Bulgaria	*n.a.*	5.65
Czech Republic	2.58	2.17
Denmark	3.82	4.16
Germany	0.54	0.52
Estonia	7.01	5.98
Ireland	2.67	2.53
Greece	4.61	4.82
Spain	1.11	1.10
France	0.94	0.83
Italy	*n.a.*	*n.a.*
Cyprus	6.07	7.69
Latvia	3.45	3.37
Lithuania	2.85	3.19
Luxembourg	2.28	2.32
Hungary	1.62	1.65
Malta	*n.a.*	*n.a.*
Netherlands	*n.a.*	*n.a.*
Austria	4.88	2.11
Poland	1.57	1.31
Portugal	2.65	2.55
Romania	*n.a.*	4.34
Slovenia	3.18	3.13
Slovakia	3.24	3.45
Finland	4.56	4.31
Sweden	2.65	2.76
United Kingdom	1.77	1.82
Liechtenstein	7.84	5.90
Norway	3.31	3.33
Switzerland	*n.a.*	*n.a.*
Croatia	*n.a.*	*n.a.*

Note: n.a.: not available

Percentage standard error of estimate (95% confidence).

Reference: Commission Regulation 642/2004 on precision requirements for data collected in accordance with Council Regulation (EC) No 1172/98 on statistical returns in respect of the carriage of goods by road.

European Commission

Methodologies used in surveys of road freight transport in member states and candidate countries

2008 — 107 pp. — 21 x 29.7 cm
Luxembourg: Office for Official Publications of the European Communities

ISBN 978-92-79-07847-7
ISSN 1977-0375

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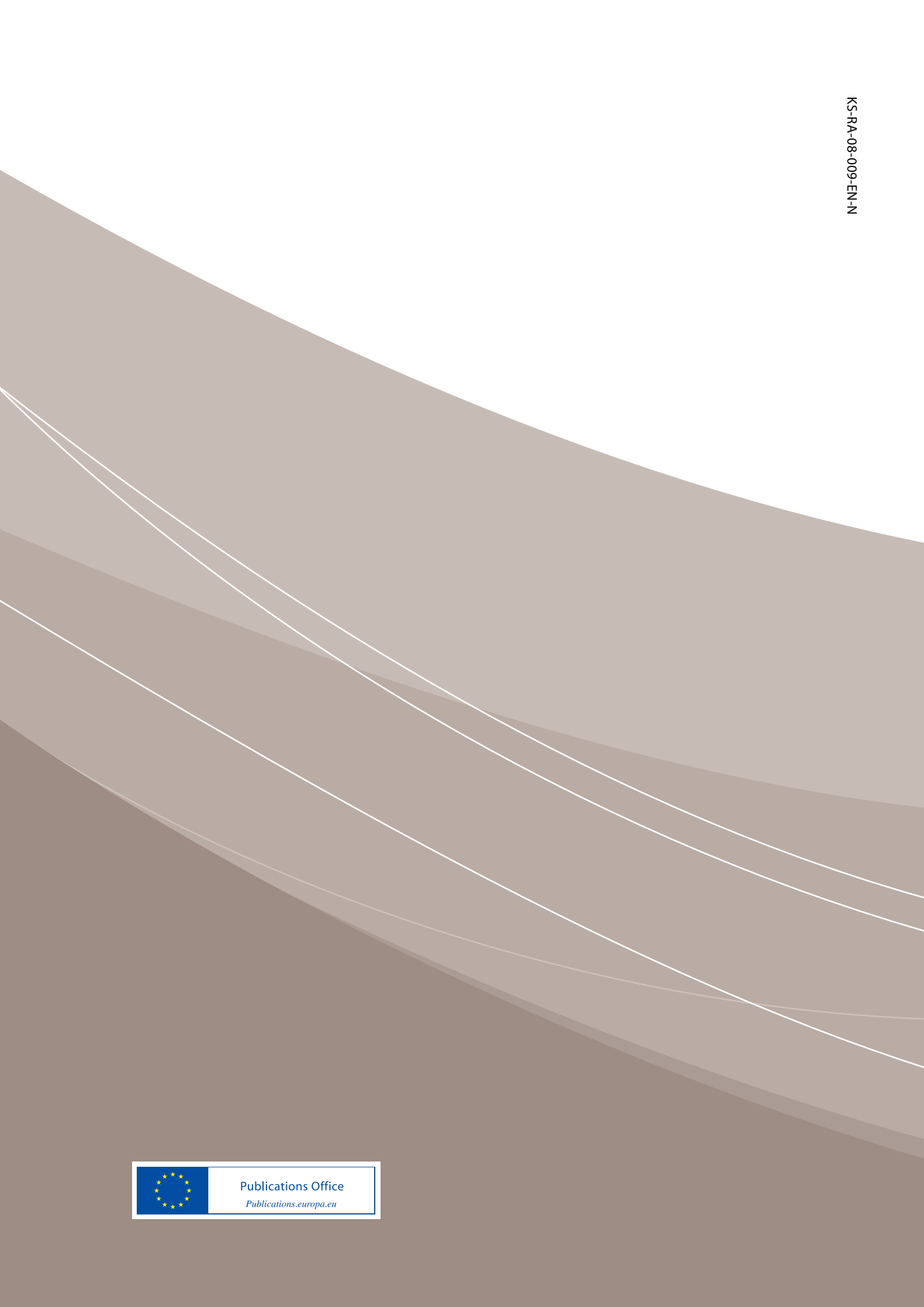
KS-RA-08-009-EN-N



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