Transport of Dangerous Goods Technical Committee of the Transport Community

26 October 2022

EU Regulation n° 70/2012 on Road Freight Transport Statistics (of which road transport of dangerous goods)

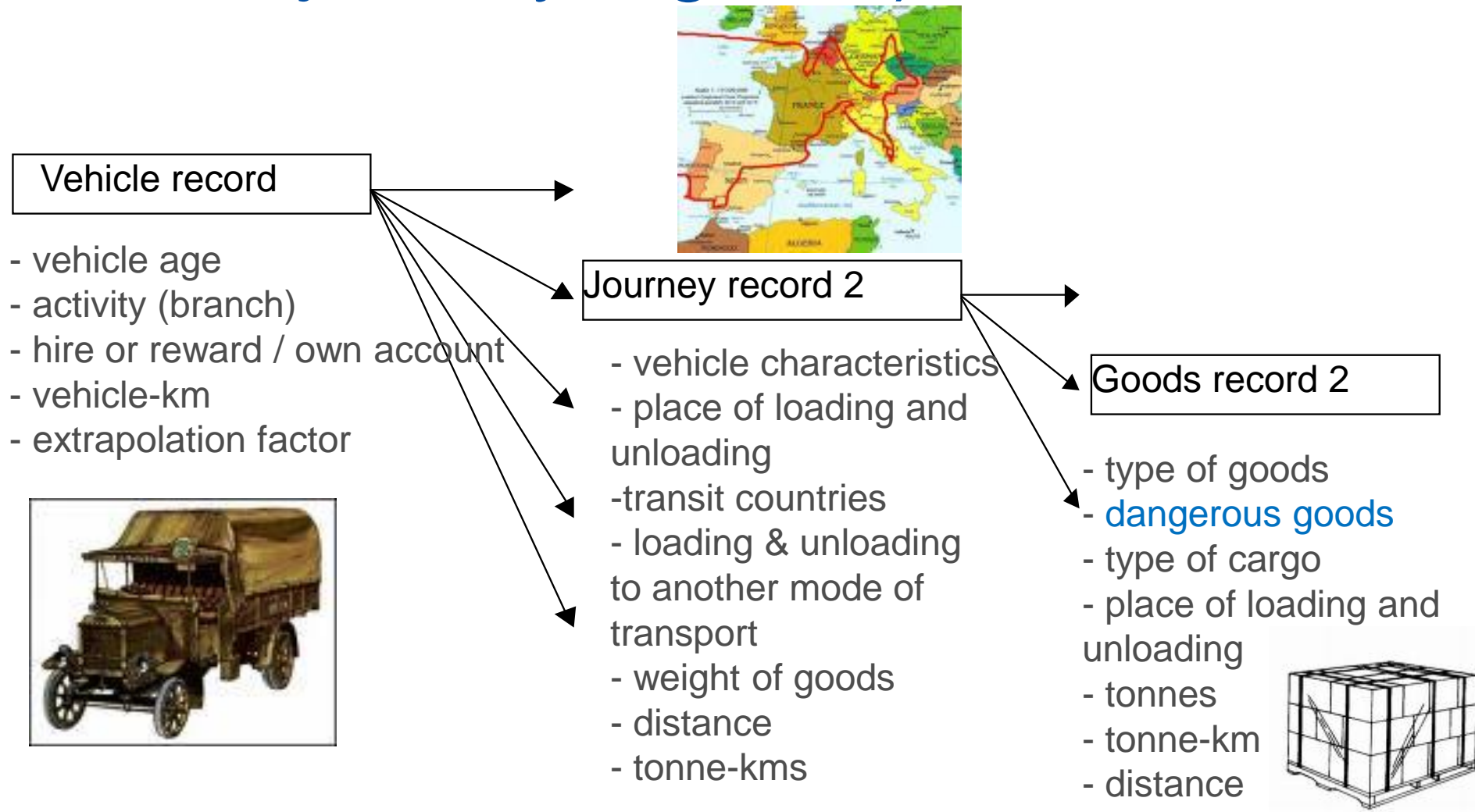*Alain GALLAIS*

Eurostat - Unit E.3 - Transport

Content

- **The main features of Road Freight Transport Statistics supervised by Eurostat since 1998 (EU regulation 1172/98 -> 70/2012):**

    - **Observation of motor vehicles registered in the country**

    - **Microdata with 3 interrelated tables (vehicle – journey – goods)**

    - **For structural and short-term statistics**

    - **Return of information to countries on the transport performed on their territory**

- **Pre-requisites: good quality of national vehicles register, national business register and geographical databases**

- **Some flexibility in methodology, follow the goods or the journey**

- **What Eurostat disseminates**

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The initial possibilities for road freight transport statistics – choice of motor vehicles

- **Observation of the customers**: allows a global approach of all modes, by origin/destination and kinds of products, including foreign vehicles. But difficult sampling, need to extrapolate the kilometres travelled.

- **Observation of the road network**: customs for international transport, cordon line surveys for domestic transport. Includes foreign vehicles. Pertinent for fine geographical purposes, hard to aggregate.

- **Observation of the loading vehicles**: good knowledge of the kind of products, less good of the distance, restricted to vehicles registered in the country, lower quality of the national vehicle register.

- **=> Observation of the motor vehicles**: good knowledge of the journey and the distances, the driver can answer, restricted to vehicles registered in the country, higher quality of the national vehicle register (technical inspections).

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Microdata with 3 interrelated tables (vehicle – journey – goods) since 1998

Vehicle record

- vehicle age
- activity (branch)
- hire or reward / own account
- vehicle-km
- extrapolation factor

Journey record 2

- vehicle characteristics
- place of loading and unloading
- transit countries
- loading & unloading to another mode of transport
- weight of goods
- distance
- tonne-kms

Goods record 2

- type of goods
- dangerous goods
- type of cargo
- place of loading and unloading
- tonnes
- tonne-km
- distance

For structural and short-term statistics

- The microdata are collected by Eurostat quarterly. The aggregates in tonne-km reflect the short-term volume of the economic activity. Aggregated tables are disseminated at quarterly pace.

- The requirement for precision makes that the most detailed tables are disseminated on Eurobase at annual pace only (of which transport of dangerous goods).

- The National Authorities usually collect weekly and disseminate monthly, with of course more details at annual level.

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Return of information restricted to National Authorities

	Description	Period	Aggregated on dimensions Note	Units
D1.1	Transport operations at country level (laden journeys)	Year	— reporting country — country of loading — country of unloading — type of goods — type of transport — age class — distance class — axle configuration	Tonnes Tonne-km Vehicle-km Movements Number of vehicle records
D1.2	Transport of dangerous goods at country level (laden journeys)	Year	— reporting country — country of loading — country of unloading — dangerous goods — type of transport	Tonnes Tonne-km Vehicle-km Movements Number of vehicle records

- Microdata collected by reporting countries can be aggregated by country of loading and country of unloading, and provide vehicle-km performed on the national territories by vehicles registered in other countries.

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Pre-requisite: access to fresh and good national (vehicles and businesses) registers

- A good quality of the national vehicles register (Ministry of Interior or Ministry of Transport): removal of "dead" vehicles, freshness of the information, identification of the owner with its full name and full address, its business register ID number, type of vehicle, body type, MPLW, load capacity, etc.

- A good quality of the national business register: in order to match with the national car register, to update addresses, add information on activity at NACE level, etc.

- Possible enrichment of the sampling with specific lists of firms provided by Ministry of Transport (for instance: licensed for international transport).

Some flexibility in the methodology

- Legislation on which the road freight survey is based does not impose:

  - Sampling frame

  - Sample size

  - Stratification

  - Survey period

- Instead, reporting countries should achieve <u>an acceptable percentage precision for main indicators </u>in their sample surveys (Article 4: precision of statistical results in EU Regulation n° 70/2012).

- Some countries have introduced Electronic Data Interchange with big firms instead of initial postal survey.

Follow the goods or the journey

- When the transport operations are not "basic" (1 single loading place, 1 single unloading place, 1 type of goods), we have to focus on the journey OR on the goods.
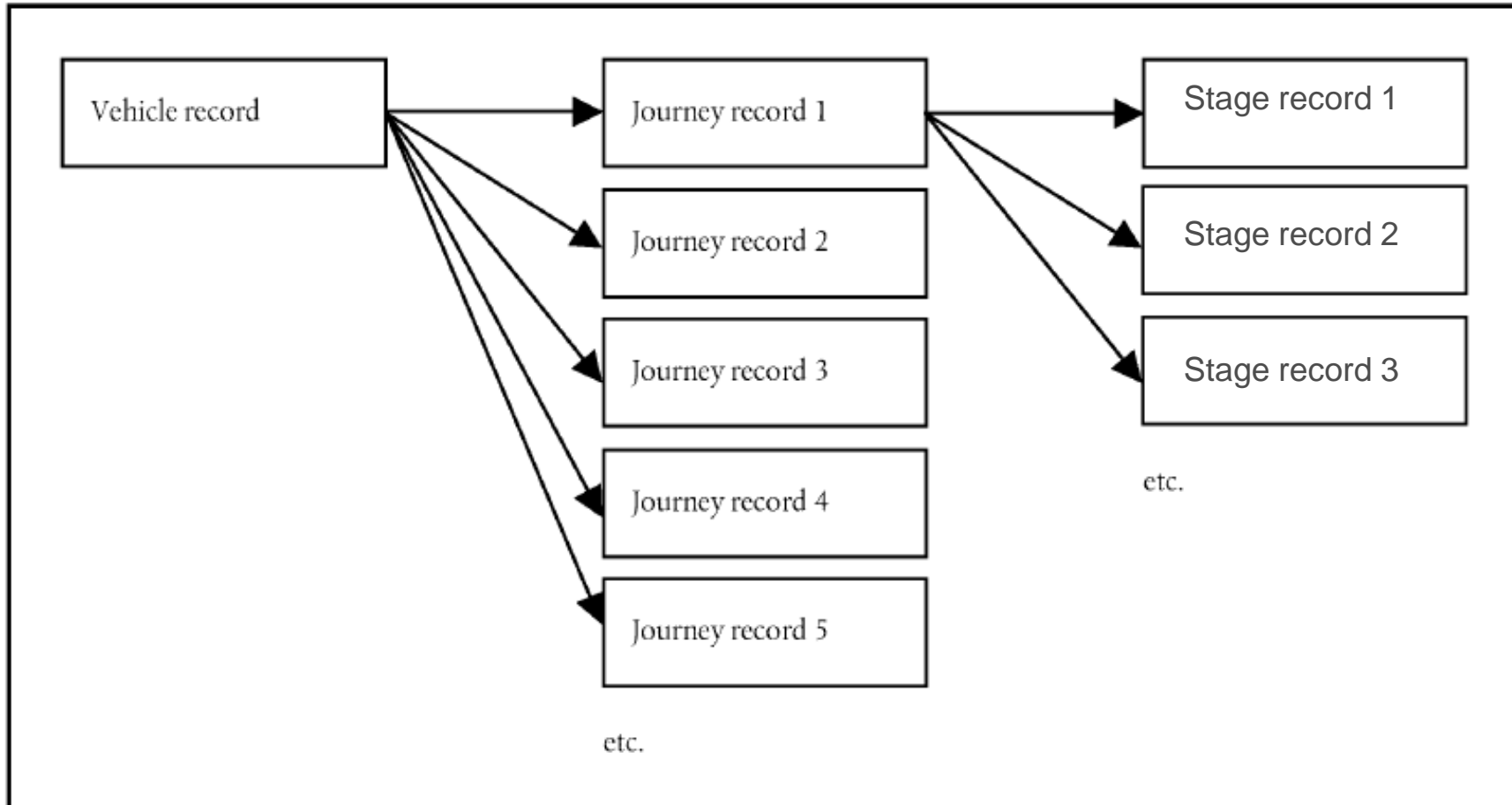
<- Follow the journey: Each "stage" records the goods loaded and the goods unloaded. But perhaps some goods loaded at the start of the journey are unloaded only at the very end…

Example of the two reporting methods

The total distance driven was 110 km and the total weight of loaded goods was 22 tonnes.
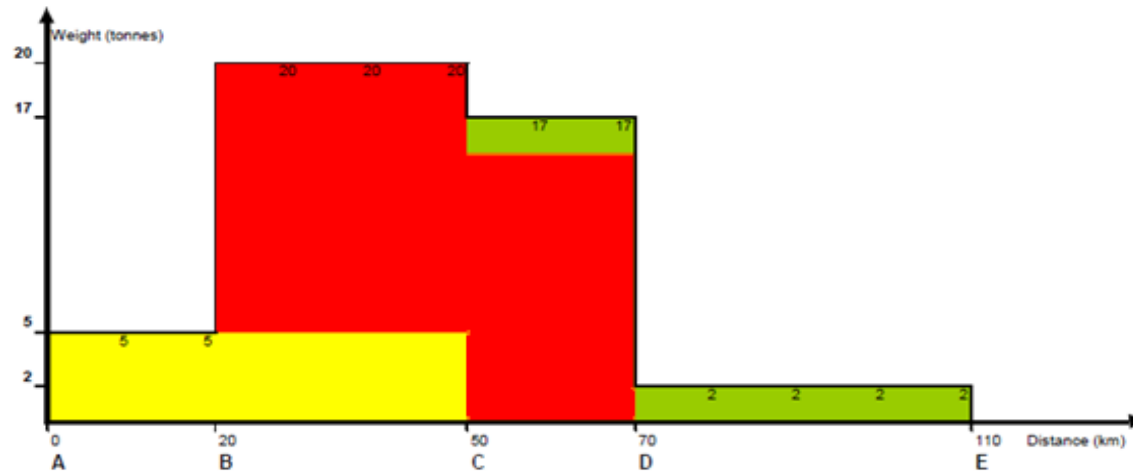
Reporting by consignments

		Weight (tonnes)	Distance (km)	Performance (TKM)*
Goods-related datasets	A-C	5	50	250
	B-D	15	50	750
	C-E	2	60	120
Journey-related dataset	Total	Sum: 22/(22)	Sum: 160/(110)	Sum: 1120

(*) TKM are computed at goods level in order to calculate the TKM performed in the journey as the sum of TKM computed for each good. However, TKM are not reported in goods-related datasets

Reporting by vertical stages

		Weight (tonnes)	Distance (km)	Performance (TKM)*
Goods-related datasets	A-B	5	20	100
	B-C	20	30	600
	C-D	17	20	340
	D-E	2	40	80
Journey-related dataset	Total	Max: 20/(22)	Sum: 110/(110)	Sum: 1120

(*) TKM are computed for each stage in order to calculate the TKM performed in the journey as the sum of TKM computed for each part of the journey. However, TKM are not reported in goods-related datasets

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Advantages and disadvantages

	Advantages	Disadvantages
Consignment (goods)	Variables on goods directly and correctly collected	Reconstitution of the journey and its total distance (within the total of the day). Risk of an overestimated total distance.
Stages (journeys)	More intuitive if filled in by the driver Journey easily deduced from stops and journey distance correctly calculated	Attribution of the correct goods to the correct places of loading / unloading if several types of goods transported. Risk of an overestimated goods weight.

What Eurostat disseminates: data

- Transport of dangerous goods is in 1 table: road_go_ta_dg (road goods transport, annual, dangerous goods).

Classification of dangerous goods

In regulation (EU) No 70/2012…

ANNEX V

CLASSIFICATION OF CATEGORIES OF DANGEROUS GOODS

1   Explosives

2   Gases, compressed, liquefied or dissolved under pressure

3   Flammable liquids

4.1   Flammable solids

4.2   Substances liable to spontaneous combustion

4.3   Substances which, in contact with water, emit flammable gases

5.1   Oxidising substances

5.2   Organic peroxides

6.1   Toxic substances

6.2   Substances liable to cause infections

7   Radioactive material

8   Corrosives

9   Miscellaneous dangerous substances

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Road_go_ta_dg on Eurobase

What Eurostat disseminates: a "*Road freight transport methodology*" manual, 2016

- Part A - Recommendations for sample surveys on the transport of goods by road
- Part B - Recommendations for the variables - Definitions and explanatory notes
- Part C - Rules for transmission of data to Eurostat and dissemination recommendations

Methodologies used in road freight transport surveys in Member States, EFTA and Candidate Countries | 2021 edition

MANUALS AND GUIDELINES

eurostat

What Eurostat disseminates (metadata): inventory of national methodologies, 2021

- For each country:
  - Sampling register used for the survey
  - Sampling methodology
- Table 1: scope of surveys
- Tables 2-4: sampling rates in space and time
- Table 5: response rate
- Table 6: register quality
- Table 7-9: precision of results
- Table 10: optional variables

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Thank you

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