



METHODOLOGICAL EXPLANATION

Nataša Gostiša

REGISTERED ROAD VEHICLES

This methodological explanation relates to the data releases:

- Registered road motor vehicles and trailers, Slovenia, annually (First Release)
- Transport, Slovenia, annually (First Release)
- Transport, Slovenia, monthly (First Release)



October 2024



Content	
1	PURPOSE..... 3
2	LEGAL FRAMEWORK..... 3
3	UNIT DESCRIBED BY THE PUBLISHED DATA..... 3
4	SELECTION OF OBSERVATION UNIT..... 4
5	SOURCES AND METHODS OF DATA COLLECTION..... 4
6	DEFINITIONS..... 5
7	EXPLANATIONS..... 8
8	PUBLISHING..... 10
9	REVISION OF THE DATA..... 10
10	OTHER METHODOLOGICAL MATERIALS..... 12

1 PURPOSE

The purpose of the monthly survey is to monitor the monthly state of first registrations of road motor and trailing vehicles in Slovenia and provide information on the trend in the number of first registrations of passenger cars in Slovenia according to the base year.

The main statistics include the number of first registrations of road motor and trailing vehicles, the number of first registrations of new passenger cars and seasonally adjusted indices of first registrations of new passenger cars.

The purpose of the annual survey is to monitor the annual state of registered road motor and trailing vehicles in Slovenia on the last day of the year.

The main statistics include:

- the number of registered road vehicles by statistical region, municipality and age,
- the number of registered road motor vehicles by type of drive and fuel by cohesion and statistical regions,
- the number of registered goods motor vehicles and buses by load capacity and number of seats.
- we also publish data of the average age of passenger cars and the number of passenger cars per 1,000 population (motorisation rate) by cohesion regions and statistical regions and by municipalities.
- we publish another indicator - renewal rate of passenger cars (passenger car fleet) by cohesion and statistical regions.
- we also publish vehicle statistics by category according to type of drive and fuel by cohesion and statistical regions.

2 LEGAL FRAMEWORK

- [Annual Programme of Statistical Surveys \(LPSR\) \(only in Slovene\)](#)
- [National Statistics Act \(OJ RS, No. 45/95 and 9/01\)](#)
- Gentlemen's Agreement between the Statistical Office of the Republic of Slovenia and Eurostat, OECD – International Transport Forum and UNECE through Common Questionnaire.

3 UNIT DESCRIBED BY THE PUBLISHED DATA

The unit described by the published monthly data is a road vehicle (motor or trailer) registered in Slovenia for the first time in the observed month.

The unit described by the published annual data is a road vehicle (motor or trailer) registered in Slovenia on 31 December of the observed year.

All registered road vehicles are observed by vehicle type, age and the legal status of the person using the vehicle. Registered road motor vehicles are being studied by type of drive and fuel, goods motor and trailing vehicles by load capacity, and buses by the number of seats.

We also observe vehicles by vehicle category, i.e. by letter designations.

4 SELECTION OF OBSERVATION UNIT

The observation units are all road vehicles (motor or trailer) which are entered in the Central Register of Vehicles and Traffic Documents (MRVL).

The coverage is full.

The actual number of observation units is about 1,7 million road vehicles, registered in Slovenia.

5 SOURCES AND METHODS OF DATA COLLECTION

Data are collected monthly.

The data are obtained from the surveys:

- First registrations of road motor vehicles and trailers (TR-CES-V/M). Data are obtained from the administrative register of the Ministry of Infrastructure (MZI), from the Central Register of Vehicles and Traffic Documents (MRVL).
- Registered road motor vehicles and trailers (TR-CES-V/L). Data are obtained from the administrative register of the Ministry of Infrastructure (MZI), from the Central Register of Vehicles and Traffic Documents (MRVL).
- Data on the municipality of the user are obtained from the administrative register of the Ministry of the Interior (MNZ) – from the Central Population Register (CPR), and from the administrative register of the Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJ PES) – from the Business Register of Slovenia (PRS).

Data are obtained from the Central Register of Vehicles and Traffic Documents (MRVL) of the Ministry of Infrastructure (MZI).

The source of data is the administrative register of motor vehicles and trailers kept by administrative units, companies authorized to carry out roadworthiness tests and the ministry responsible for transport. SURS receives monthly data from the MRVL register from the statistical database MRVL-STAT. The data reflect the state of the database at the time of collection (usually at night on the last day of the month).

Data on the municipality of the user are obtained from the administrative register of the Ministry of the Interior (MNZ) – from the Central Population Register (CPR), and from the administrative register of the Agency of the Republic of Slovenia for Public Legal Records and Related Services (AJPES) – from the Business Register of Slovenia (PRS).

6 DEFINITIONS

Type of vehicle is defined by vehicle category in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009), upgrade and additional upgrade.

- **Road vehicle** is a vehicle running on wheels and intended for use on roads.
- **Motor vehicle** is a vehicle intended for driving on roads using its sole means of propulsion, except vehicles running on rails and bicycles with auxiliary engine. Included are all vehicles from categories M1, M2, M3, N1, N2, N3, L1e, L2e, L3e, L4e, L5e, L6e, L7e, T1, T2, T3, T4, T5, and C, in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009).
- **Moped** is a two- or three- or four-wheeled road vehicle which is fitted with an engine having a cylinder capacity of less than 50cc and whose maximum authorized design speed does not exceed 45 km/h. Included are all vehicles from categories L1e, L2e and L6e in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009).
- **Motorcycle** is a two-wheeled road motor vehicle with or without a side-car or a three-wheeled road motor vehicle, all with a cylinder capacity of 50cc or over or a vehicle with maximum authorized design speed which exceeds 45 km/h. Included are also four-wheelers not exceeding 400 kg of unloaded weight (550 kg for vehicles carrying goods). Included are all vehicles from categories L3e, L4e, L5e and L7e in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009).
- **Passenger car** is a road motor vehicle with at least four wheels intended for the carriage of passengers and designed to seat no more than nine persons (including the driver). Included are all vehicles from categories M1 in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009).
- **Special purpose passenger car** is a passenger car designed for purposes other than the carriage of passengers. This category includes e.g. fire brigade vehicles, ambulances, hearses, driving school cars, racing cars and other passenger cars not specified elsewhere.

- **Bus and minibus, coach and minicoach** is a passenger road motor vehicle designed to seat more than nine persons (including the driver). Included are all vehicles from categories M2 and M3 in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009).
- **Goods motor vehicle** is a motor vehicle with at least four wheels, intended for carriage of goods. Included are all vehicles from categories N1, N2 and N3 in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009).
- **Lorry** is a rigid goods motor vehicle.
- **Special purpose lorry** is a lorry intended for special purposes, which demands special adjustments of car body and/or special equipment. This category includes e.g. tankers, livestock carriers, concrete mixer lorries, lorries with temperature controlled boxes, forestry lorries, tippers, lorries with cranes, lorries adapted for carrying dangerous goods, etc.
- **Service vehicle** is an adapted goods motor vehicle with built-in gear for performing special works and not intended for carriage of goods. Included are only vehicles with maximum authorized design speed which exceeds 40 km/h. This category includes e.g. fire brigade vehicles, ambulances, mobile cranes, self-propelled rollers, bulldozers with metallic wheels or track, vehicles for recording film, radio and TV programmes, mobile library vehicles, towing vehicles for vehicles in need of repair, and other road vehicles not specified elsewhere. Special purpose lorries are excluded.
- **Road tractor** is a road motor vehicle designed, exclusively or primarily, to haul other road vehicles which are not power-driven (mainly semi-trailers). Agricultural tractors are excluded.
- **Tractor (mainly agricultural)** is a motor vehicle designed exclusively or primarily for agricultural purposes whether or not permitted to use roads open to public traffic. Included are all vehicles from categories T1 - T5, and C1 – C5 in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009).
- **Trailing vehicle** is a road vehicle designed to be hauled by a road motor vehicle. Included are all vehicles from categories O1 – O4, R1 – R4 and S1 – S2 in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009).
- **Goods trailing vehicle** is a trailing vehicle intended for carriage of goods. This category includes trailers and semi-trailers.
- **Trailer** is a goods road vehicle designed to be hauled by a road motor vehicle. This category excludes agricultural trailers and caravans.
- **Semi-trailer** is a goods road vehicle with no front axle designed in such way that part of the vehicle and a substantial part of its loaded weight rests on the road tractor.
- **Caravan** is a road vehicle not intended for the carriage of passengers and/or goods and designed to be hauled by a passenger car. The term caravan, therefore, includes road vehicles intended mainly for recreational purposes.
- **Tractor trailer (mainly agricultural)** is a trailer designed exclusively or primarily for agricultural purposes and to be hauled by an agricultural

tractor, whether or not permitted to use roads open to public traffic. Included are all vehicles from categories R1 – R4 and S1 – S2 in accordance with the classification of vehicles laid down in Annex I to the Rules on Conformity Assessment Procedures for Vehicles (Official Journal of RS, no. 105/2009).

Load capacity is the difference between maximum permissible mass of the loaded vehicle and the mass of the empty vehicle declared by the manufacturer.

Number of seats is the number of seats, including the driver's, available in the vehicle when it is performing the service for which it is primarily intended.

Size of engine is engine capacity expressed in cubic centimetres.

Type of drive and fuel is the principal type of motor energy used by the vehicle.

Age of vehicle is the difference between the year of production and the current year.

The number of all vehicles on 31 December includes all road motor vehicles and trailers, which are registered in Slovenia on 31 December of the selected year.

Number of first registrations of vehicles includes all road motor vehicles and trailers registered for the first time in the selected period in Slovenia, regardless of the time when they were removed from the traffic.

New vehicles in the new register (since March 2007) are vehicles whose date of first registration is identical to the date of first registration in Slovenia.

User of vehicle is a legal entity or natural person stated as the vehicle user in the Central Register of Vehicles and Traffic Documents (MRVL register).

Number of passenger cars per 1,000 population (motorisation rate). The indicator is calculated by dividing the number of passenger cars registered in Slovenia on 31 December by the population in Slovenia on 1 January of the following year. Special purpose passenger cars are excluded.

Average age of passenger cars. Passenger cars registered in Slovenia on 31 December are included. Special purpose passenger cars are excluded.

Average age of the first time registered used passenger cars. First time registrations of those passenger cars in Slovenia in the observed year, that had already been registered outside Slovenia, are included. First time registered used special purpose passenger cars are excluded.

Renewal rate of passenger cars (passenger car fleet). The share of the first registrations of new passenger cars among all registered passenger cars (number of the first registered new passenger cars per 100 all registered passenger cars).

7 EXPLANATIONS

7.1 CLASSIFICATIONS

Data are published:

- By municipalities, according to the territorial classification – at the SKTE 5 level
- By statistical regions, according to the territorial classification – at the NUTS 3 level
- By cohesion regions, according to the territorial classification – at the NUTS 2 level

More information about classifications is available on:

<http://www.stat.si/StatWeb/Methods/Classifications>

7.2 DATA PROCESSING

DATA EDITING

Data were statistically edited with the combination of systematic corrections and imputation procedures, namely hot-deck imputations.

Data are edited by variables "municipality", "load capacity" and "type of fuel". Data on the municipality of vehicles from 2014 on are linked with two administrative sources: CRP and PRS. If we cannot obtain any data on the municipality from any of these registers, we obtain them from the MRLV register by the method of internal donor ("hot deck"), i.e. donor data within administrative units.

Data on the municipality before 2014 were not linked with the above registers but we took them directly from the MRVL and imputed the missing data.

If data on the load capacity of the vehicle are incorrect (negative or excessively high value), missing data are imputed by the method of internal donor ("hot deck") within the kind of vehicle, brand, type and sub-type of the vehicle. The same applies to the fuel data.

From the old databases (until 2005) duplicates were eliminated. Vehicles were defined as duplicates if they had the same values for all of the listed variables: kind of vehicle, mark, type, sub-type, year of production and the chassis number.

For more, see the general methodological explanations [Statistical data editing](#).

WEIGHTING

Weighting was not performed.

SEASONAL ADJUSTMENT

Since 1998 indices on first registration of new passenger cars are seasonally adjusted on the average of the base year. These are base indices; the base since 2023 is the 2019 average.

For seasonal adjustment of time series we use the TRAMO/SEATS method. A time series model is set up, and it is revised in detail and corrected about once a year. By using the model, the time series is decomposed into:

- the trend-cycle component (which consists of the trend and cyclical movements over a period longer than one year),
- the seasonal component (which consists of the seasonal effects and the calendar effects; the calendar effects are composed of the working day effect, the leap-year effect, the holiday effect and the Easter effect),
- the irregular component (which consists of random fluctuations and some outliers).

Seasonally adjusted data are original data from which the seasonal and calendar effects are eliminated.

For more, see the general methodological explanations [Seasonal adjustment of time series](#).

DATA PROCESSING OTHER

/

7.3 INDICES

Monthly data on first registrations of new passenger cars are presented in three types of indices. The base year is the average in 2019 and it changes every 5 years.

For more, see the general methodological explanations [Index numbers](#).

7.4 PRECISION

The precision is not calculated.

7.5 OTHER EXPLANATIONS

In the matrix or SiStat table [Goods vehicles, trailers and buses and first registrations of those vehicles by type of vehicle and load capacity / number of seats, Slovenia, annually](#) the totals of load capacity and seats do not always add up due to rounding to 1,000.

8 PUBLISHING

- SiStat Database: [Transport](#) - Road Transport - Registered road vehicles; (absolute data, seasonally adjusted indices, NUTS 0 - 3 and SKTE 5).
- SiStat Database: [Transport](#); (absolute data, indicators, average, rates (%), NUTS 0 - 3, SKTE 5).
- First Release (Transport, Registered road vehicles): »Transport, Slovenia, monthly«.
- First Release (Transport, Registered road vehicles): “Transport, Slovenia, annually.”
- First Release (Transport, Registered road vehicles): “Registered road motor vehicles and trailers, Slovenia, annually.”
- [Statobook](#)
- [Our little car](#)
- EUROSTAT (Statistical Office of the European Union) - REGWEB, Urban Audit
- United Nations (UN) - UNECE - Monthly Bulletin
- The Organisation for Economic Co-operation and Development (OECD) - Main Economic Indicators, Regional Questionnaire
- OECD – International Transport Forum (ITF)
- International Road Federation (IRF) - IRF in WRS Statistics

9 REVISION OF THE DATA

9.1 PUBLISHING OF PRELIMINARY AND FINAL DATA

Provisional data are not disseminated. Only final data are published.

9.2 FACTORS INFLUENCING COMPARABILITY OVER TIME

Until the end of 1991 data on **lorries** include also **road tractors** and data on **special passenger cars** include also **special lorries** and **service vehicles**.

Data on registered **motorcycles** are shown since 1992 and data on registered **agricultural tractors** since 1994. Data for those categories are available before those years; however, due to differences in methods of recording, large variations occurred during those years, so data are not published. **Mopeds** were not registered in Slovenia before April 2002. Therefore, the aggregates “**Vehicles – Total**” and “**Motor vehicles**” do not include data on **motorcycles** until the end of 1991, **agricultural tractors** until the end of 1993 and **mopeds** until the end of March 2002.

In March 2006 a new register of road vehicles was established. The previous version of the register contained a large number of inactive vehicles, mostly

tractors (mainly agricultural), tractor trailers (mainly agricultural) and caravans, which were transferred to the new register but lost the status of a registered vehicle after one year if registration for them was not extended. The number of vehicles registered in those categories decreased significantly in 2007.

With the new register also the definition of "**new vehicle**" has changed. For new vehicles, the data from the old register (data up to and including February 2006) consider vehicles whose year of construction is the same as the current year, while vehicles constructed in January, February and March of the current year refers to the previous year. In the new register (data since March 2006) "new vehicles" are vehicles whose date of first registration of the vehicle is the same as the date of first registration of the vehicle in Slovenia.

On 31 December 2007 **an exceptional growth** in the number of registered **motorcycles** was recorded. This difference is not due to a large increase in 2007 but to reported temporary removals of motorcycles from the register during the winter months in the previous years. Until 2007 a large number of motorcycles were registered only during the summer months because of lower costs of insurance and road tax. After 2007 a much smaller number of reported temporary removals of motorcycles from the register were recorded also due to changed conditions of motorcycle insurance in 2007.

Data on **first registrations** are available since 1998. However, a number of breaks in the data series prevent us from analysing historical data.

For instance: breaks in the data series are the introduction of:

- Value added tax in the second half of 1999
- Registration of **mopeds** since April 2002
- Registration of old **tractors (mainly agricultural)** in 2005
- Break in the series for goods trailing vehicles due to the change in the categorization of vehicles in 2006
- Break in the series for agricultural tractors, agricultural trailers and caravans at the end of 2007 due to the exclusion of inactive vehicles
- Break in the series for motorcycles at the end of 2007 due to non-removal of vehicles during the winter
- Obligatory registration of **mopeds** with the maximum speed of 25 km/h since May 2017 (possible already since April 2017)
- Due to the coronavirus (COVID-19) epidemic, the registration of road vehicles in Slovenia was not possible between 17 March 2020 and 19 April 2020
- Since June 2022, the amendment to the Drivers Act simplifies the conditions for obtaining a driver's license for mopeds and motorcycles up to 125 cubic centimetres.

Since 2014, when determining the number of passenger cars, buses and goods motor vehicles by **type of fuel**, we also consider the **type of drive**. A vehicle can be powered by an internal combustion engine or it can have an electric drive or it can be a hybrid. Vehicles with electric drives are placed in the category of "electric vehicle", regardless of the type of fuel they use. The same is true for the hybrid vehicles. Vehicles powered by an internal combustion engine are classified into the categories "Petrol", "Diesel, oil, fuel oil", "Liquefied

Petroleum Gas” (LPG), “Natural Gas” and “Other”.

These data are not directly comparable with data for previous years.

Data have not been recalculated backwards at any changes.

Methodological explanation on revision of statistical data is available on

<http://www.stat.si/dokument/5299/RevisionOfStatisticalDataMEgeneral.pdf>.

10 OTHER METHODOLOGICAL MATERIALS

Methodological materials on SURS's website are available at <https://www.stat.si/statweb/en/Methods/QuestionnairesMethodologicalExplanationsQualityReports>.

- Questionnaire:
 - SURS does not collect data for this survey by using a questionnaire.
- Quality report for the survey:
 - Registered Road Vehicles (TR-CES-V/L, TR-CES-V/M)

Theme: Transport, SubTheme: Road Transport

- [Reference Metadata in Euro SDMX Metadata Structure \(ESMS\): Common Questionnaire for Inland Transport Statistics](#)
- [Glossary on Transport Statistics](#) (Glosar za statistiko transporta)
- [Motor Vehicle Act](#) (Zakon o motornih vozilih) (only in Slovene)
- [Rules on the Registration of Motor Vehicles and Their Trailers](#) (Pravilnik o registraciji motornih in priklopnih vozil) (only in Slovene)
- [Rules on Conformity Assessment Procedures for Vehicles](#) (Pravilnik o ugotavljanju skladnosti vozil) (only in Slovene)
- [Regulation \(EU\) No 167/2013](#)
- [Regulation \(EU\) No 168/2013](#)
- [Regulation \(EU\) 2018/858](#)