



METHODOLOGICAL EXPLANATION

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DAILY PASSENGER MOBILITY

This methodological explanation relates to the data releases:

- Daily passenger mobility, Slovenia, quadrennial (First Release)
- European Mobility Week, Slovenia, annual (Occasional edition)
- Daily passenger mobility, Slovenia, quadrennial (Electronic Release)



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1 PURPOSE

The purpose of the data release is to show the daily mobility of residents of Slovenia aged 15–84. These are the data on daily travel habits, movements, trips up to 300 km: how many and how (walking or by any other mode of transport) persons travel, how much time they spend, the distance of the trip, and what the trip purpose is (work, education, leisure, shopping, etc.).

2 LEGAL FRAMEWORK

- [Annual Programme of Statistical Surveys \(LPSR\) \(only in Slovene\)](#)
- [National Statistics Act \(OJ RS, No. 45/95 and 9/01\)](#)
- Partner agreement with the Eurostat (co-financing of the survey)

3 UNIT DESCRIBED BY THE PUBLISHED DATA

The unit described by the published data is a trip made by a resident of Slovenia aged 15–84 in the selected period. Trips are shown by their purpose, according to their distance, duration, mode of transport, fuel used (if they travelled by car).

4 SELECTION OF OBSERVATION UNIT

The unit of observation is a resident of Slovenia, aged 15–84, living in a private household, and their trips in one day.

The basis for the sampling frame was the Central Population Register or more precisely the Demographic Database prepared by SURS. The sampling frame is made up of the population of Slovenia aged 15–84 in the period of data collection and living in private households.

In 2021, the data were collected simultaneously by telephone interview and by WEB interview. The sample was stratified. Strata were defined by sex, age group (4 groups) and by level of attained education (4 groups) – in total 32 strata. The division into telephone and WEB part was not random, but depended on whether the person or their household has a publicly announced telephone number. 20,554 persons were selected in the WEB sample, and 17,371 persons in the telephone sample; in total 37,925 persons.

In 2017, the data were collected simultaneously by face-to-face interview (personal data collection) and by WEB interview. Two independent samples were selected. The sample for WEB data collection was stratified systematic; the sample for personal data collection was stratified two-stage (1,143 sample units were selected at the first stage; at the second stage 7 persons were selected in each selected sample unit). Stratification was geographical (12

statistical regions) and by type of settlement (6 types according to the degree of urbanisation). 15,015 people aged 15–64 were selected in the WEB sample, and 8,001 people aged 15–84 were selected for field data collection. Since the population aged 65–84 was not included in the WEB sample, this age group was oversampled in the field sample (personal data collection).

5 SOURCES AND METHODS OF DATA COLLECTION

Data are collected quadrennially.

We obtain the data with the Survey on Daily Passenger Mobility. Data were collected simultaneously by two independent modes: in 2021 by WEB interview and by telephone interview (CATI), and in 2017 by WEB interview and by face-to-face interview (CAPI).

The questionnaire Daily Passenger Mobility (TR-MOB) was divided into three sections:

- Questions about the selected person and about the selected day; the reason for non-participation in daily mobility on the selected day
- Questions about trips and parts of the trips (if several means of transport were used)
- Questions about ownership of bicycles and some electric means of transport; questions about the daily use of public transport and *carpooling*; questions about the household.

In 2021, data collection took place in two periods, namely in spring (14.5. – 18.6.) and in autumn (8.9. – 19.10.). The original plan was to collect data during the whole year 2021, however due to the epidemic of covid-19 it took place in the stated periods.

In 2017, data collection took place during the last two weeks in September and in October.

It is true for both years that during these periods, there were no holidays, the school year and the academic year were underway, and there were no weather extremes, so the period for each year can be representative for the entire calendar year.

For proper results, it was necessary to ensure an equal distribution of working and non-working days. In the WEB survey, the observation day for the selected person was determined in advance and was written in the information letter. In the field and telephone survey, the interview manager and the interviewers were responsible for the equal distribution of working and non-working days.

Data on educational attainment and activity status of selected person, and household income are obtained from our own statistical sources:

- Persons in employment (DAK),
- Structure of population (DEM-PREB/ČL),
- Income of the population (RAVEN_DOH).

Data for the survey are not obtained from administrative sources.

6 DEFINITIONS

Definitions followed Eurostat guidelines on Passenger Mobility Statistics, Eurostat, December 2018.

A trip-maker is a respondent (aged 15–84) who reported at least one trip on the observation day.

An observation day lasted from 3.00 in the morning of the selected day to 2.59 in the morning of the following day. Such an observation day enabled the capture of evening (early morning) trips.

Mobility on working and non-working days Working days: from Monday to Friday; Non-working days: Saturday, Sunday

A trip is the movement on a public road, path made for a certain purpose such as work, school, shopping, etc. The trip-maker could walk or use one or more modes of transport. Only trips longer than 100 m and up to 300 km were taken into account. The trip could start or end over the country border; the trips taking place fully abroad were excluded. A trip could also be a loop, e.g. walk, recreational running.

A trip purpose/motive is the main activity at the trip destination. One purpose equals one trip; with a change of the purpose a new trip starts. Possible purposes: work, professional/business, education, shopping, escorting (picking up/accompanying), leisure, personal business.

- A trip purpose *returning home* was changed (re-coded) during the data processing for the purpose of the longest distance of the previous route.
- A trip purpose *leisure*: Visiting friends/relatives, going out to eat or drink, recreational activities (indoor or outdoor), to walk a pet, to work in the garden, sightseeing, visiting cultural or sport events.
- A trip purpose *personal business*: health treatment, personal care (e.g. hairdresser), services (e.g. car maintenance), going to the bank, post, religious activities (also funerals).

Distance (in km) is the length of a driven/walked trip. Only the distances of trips made on public roads/paths were included in the survey; trips made on private areas (e.g. gardens, fields) were excluded.

Travel time (in min) is the time spent on a trip.

Mode of transport is defined as to whether a person is using a vehicle or not. Possible modes of transport are: walking/running, bicycle, car (as driver or as passenger), taxi, van, bus, train, motorcycle.

The main mode of transport is the mode that was used for the longest distance within a trip.

Vehicle occupancy is defined as the number of persons in a passenger car irrespective of their age.

Fuel type is defined as a type of fuel (energy carrier) used in a vehicle (passenger car – taxi is not included). Types: petrol, diesel, electricity, LPG, CNG.

Public means of transport: included are buses, coaches and trains in the scheduled public transport - routes are defined on a predetermined schedule, and so are the price and general transport conditions.

Carpool (also carpooling) is the sharing of the ride on trips so that more than one person travels in a car. The passengers are not members of the drivers household. The driver and passengers share the costs of fuel. Usually, the drivers take turn each day. Carpool can be regular, daily or weekly, it can also be a single ride when people agree to do so, most likely via internet sites. Employed and self-employed persons, and persons in education are included in the survey.

7 EXPLANATIONS

7.1 CLASSIFICATIONS

Some of the published data are broken down by statistical regions, in accordance with the Nomenclature of Territorial Units for Statistics (NUTS 3) (interpretation of classifications is available at: <http://www.stat.si/statweb/en/Methods/Classifications>).

7.2 DATA PROCESSING

DATA EDITING

Data were edited with the combination of systematic corrections, individual corrections and imputation procedures. The following imputation methods were used: logical imputations, mean imputations, hot-deck imputations.

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

WEIGHTING

With weighting adjustment we want to achieve representativeness of the sample, so that the weighted data give us as good population estimates as possible. The process of weighting depends on the sampling design, the unit non-response rate and available auxiliary variables used for calibration. The final weight is the product of the sampling weight, the non-response weight and the calibration factor.

SEASONAL ADJUSTMENT

Seasonal adjustment is not applicable.

7.3 INDICES

Indices are not published.

7.4 PRECISION

In statistical surveys different kinds of errors can occur (e.g. sampling error, non-response error, measurement error) influencing the reliability and accuracy of the statistical results. Errors deriving from the random mechanisms determine the precision and consequently the reliability of the statistical estimates. The precision of the statistical estimate is estimated by calculating the standard error (SE). The Statistical Office of the Republic of Slovenia draws attention to less reliable estimates by flagging them with a special sign.

If the table contains estimated population totals of (continuous) variables, estimated averages of continuous variables or estimated ratios of population totals of (continuous) variables, publishing limitations are determined by the relative standard errors or the coefficients of variation (CV). In such cases it holds:

If the coefficient of variation (CV) is

- 10% or below ($CV \leq 10\%$), the estimate is reliable enough and is published without limitations;
- between 10% and up to 30% ($10\% < CV \leq 30\%$) the estimate is less reliable and is flagged for caution with letter M;
- over 30% ($CV > 30\%$), the estimate is too unreliable to be published and therefore suppressed for use by letter N.

For more, see the general methodological explanations [Precision of statistical estimates](#).

7.5 OTHER EXPLANATIONS

SURS carried out the survey on daily passenger mobility with the help of European funds and according to [Eurostat guidelines on Passenger Mobility Statistics](#) (Eurostat, December 2018).

Some totals do not add up due to rounding.

Some methodological features:

In the SiStat Database there are two types of averages:

- In the tables where the title states *the average per person*, the denominator used in the calculation is always the same, it is the number of residents aged 15–84, i.e. 1,705,402 and 1,676,954 – the number from mid-2021 and mid-2017, respectively.
- In the tables where the title states *the average per mobile person*, only the mobile residents were used in the calculation, i.e. those persons who made at least one trip on a working or non-working day with the stated purpose or the stated mode of transport.

If the selected person was a professional driver, his/her possible professional trips were not taken into account, for example: trips of taxi drivers, truck drivers, and different deliverers, while the trips to/from work were taken into account.

Data on statistical regions: The sum of trips by regions is not equal to the number of trips recorded in Slovenia; the sum of passenger kilometres (PKM) by regions is not equal to the recorded number of PKM in Slovenia; the total of time by regions is not equal to the recorded time spent on trips in Slovenia; the same is valid also for the calculations of average distance per trip or average travel time. Explanation: the trips which only started or only ended in a region are counted also in the region where they ended or started – such interregional trips (and their distances and travel time) are thus counted twice.

8 PUBLISHING

- SiStat Database: Transport – Road transport – [Daily Passenger Mobility](#). Data are published in the form of absolute values, structural shares and averages. Data are mostly published at the country level, minor part also on the level of statistical regions, and urban municipalities Ljubljana and Maribor.
- First Release Transport, Road transport: »Daily Passenger Mobility«.
- Electronic Release Transport, Road transport: »Daily Passenger Mobility«.
- Occasional edition: »European Mobility Week«.
- [Statobook](#)
- EUROSTAT (Statistical Office of the European Union)

9 REVISION OF THE DATA

9.1 PUBLISHING OF PRELIMINARY AND FINAL DATA

The results for 2021 are final.

For 2017, the preliminary results were released in September 2018. Final results were published in 2019 and 2020.

Publishing of provisional and final data is planned. Due to the needs of users for timely information, provisional data are published that meet the criteria of the quality of official statistical data but do not meet the quality that can be met with complete coverage. Data are revised when recent, more complete and better data can significantly contribute to the quality of data-based decision-making.

9.2 FACTORS INFLUENCING COMPARABILITY OVER TIME

Both points in time are comparable.

In 2021, data were collected by WEB interview and by telephone interview (CATI), and in 2017, by WEB interview and by face-to-face interview (CAPI). Since the population aged 65–84 in 2017 was not included in the WEB sample, this age group was oversampled in the field sample.

In 2021, data collection took place in two periods, namely in spring (14.5. – 18.6.), and in autumn (8.9. – 19.10.). In 2017, data collection took place during the last two weeks in September and in October. For each year, the period of data collection can be representative for the entire calendar year.

10 OTHER METHODOLOGICAL MATERIALS

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

- Questionnaire:
 - [Passenger daily mobility](#) (TR-MOB)

Theme: Transport, Subtheme: Road Transport

- [Eurostat guidelines on Passenger Mobility Statistics](#) (Eurostat, December 2018)