



METHODOLOGICAL EXPLANATION

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USE OF MOBILE OPERATORS' DATA FOR TOURISM PURPOSES

This methodological explanation relates to the data releases:

- Use of mobile operators' data for tourism purposes, Slovenia, quarterly (Experimental statistics)
- Use of mobile operators' data for tourism purposes, Slovenia, annually (Experimental statistics)



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1 PURPOSE

The use of big data from mobile operators opens up new possibilities for evaluating tourist flows. Statistics obtained in this way are a supplement to the surveys already conducted by SURS in the field of tourism statistics. The purpose of publishing the data is to show a set of statistics that the big data from mobile operators processing enable us to do in the field of tourism statistics.

2 LEGAL FRAMEWORK

- [Annual Programme of Statistical Surveys \(LPSR\) \(only in Slovene\)](#)
- [National Statistics Act \(OJ RS, No. 45/95 and 9/01\)](#)

3 UNIT DESCRIBED BY THE PUBLISHED DATA

The unit described by the published data is a user of mobile telephony services abroad (determined based on a telephone number): a Slovenian user roaming in foreign networks and a foreign user roaming in the Slovenian network.

4 SELECTION OF OBSERVATION UNIT

The observation units are users of mobile telephony services abroad: Slovenian users roaming in foreign networks and foreign users roaming in the Slovenian network.

Only users of mobile telephony services who were roaming in foreign networks during the given reference period (observed month) are included in the survey.

Based on the duration of the connection to the network (on the basis of the total duration of data sessions established between the user's mobile device or terminal and the operator in a two-day period), an individual user is classified into one of four categories for each individual day: tourist, same-day visitor, half-day visitor and transit passenger.

Data on users can include besides mobile phones also data on other smart devices if they used mobile phone network for their operation. In addition, data can also include usage of mobile phone networks by devices that connect and exchange data with other devices (Internet of Things).

The usage of eSIM cards, which are offered by mobile phone operators in the EU, is counted to the country of the mobile phone operator that provides eSIM card service and not to the country from where foreign mobile phone users are actually coming.

5 SOURCES AND METHODS OF DATA COLLECTION

Data are collected monthly.

The data are collected by the Agency for Communication Networks and Services of the Republic of Slovenia (AKOS). AKOS forwards aggregated data to SURS once a month.

6 DEFINITIONS

Users: individuals who use mobile telephony services while roaming in foreign networks. The user is defined by the mobile phone number (MSISDN). Regardless of the number of roaming sessions in a given period (reporting month), an individual user is counted only once.

Slovenian users: subscribers and prepaid subscribers of Slovenian mobile phone operators who roam in foreign networks.

Foreign users: subscribers and prepaid subscribers of foreign mobile phone operators who roam in networks of Slovenian mobile phone operators.

Tourists: the total duration (despite possible interruptions) of the data exchange session in two consecutive days was between 18 hours and 48 hours.

Same-day visitors: the total duration (despite possible interruptions) of the data exchange session in two consecutive days was between 12 hours and 18 hours.

Half-day visitors: the total duration (despite possible interruptions) of the data exchange session in two consecutive days was between 6 hours and 12 hours.

Transit passengers: the total duration (despite possible interruptions) of the data exchange session in two consecutive days was up to 6 hours.

The **eSIM card** is a virtual SIM card that is permanently installed in the mobile device and substitutes the classic SIM card. It enables to switch mobile phone operator without physical change of a card, which make it easier for the users to switch between mobile phone operators. Activation of an eSIM card is made digitally, for example by scanning QR code or by mobile phone operators application. It can be used also by users who are not citizens of the EU.

7 EXPLANATIONS

7.1 CLASSIFICATIONS

The data are published by countries. The classification used is [COUNTRY - Countries and other territories - Slovenian standard ISO 3166](#).

7.2 DATA PROCESSING

DATA EDITING

Data are subject to content review. In the case of divergent values, we notify AKOS, which revises the data if necessary.

WEIGHTING

Weighting was not performed.

SEASONAL ADJUSTMENT

Seasonal adjustment is not applicable.

7.3 INDICES

Indices are not published.

7.4 PRECISION

The precision is not calculated.

7.5 OTHER EXPLANATIONS

The sum of users by individual types generally exceeds the total number of users, as an individual user can be a tourist, a same-day visitor, a half-day visitor or a transit passenger during the observed period.

As there are many methodological and definitional inconsistencies between the surveys, mobile operators statistics, which in this case are cited as experimental statistics, and statistics of other official surveys on tourism statistics, cannot be compared directly.

As part of the mobile operators' statistics, an individual is defined as a user of a mobile device roaming in a foreign network during the trip. In order to be

recognized as a "traveller", they must therefore have an active mobile device, which is not a requirement in the case of other surveys.

Mobile operators' statistics also do not contain other details about individuals' trips (e.g. the reasons for travel) on the basis of which it is determined whether an individual visit is actually a "tourist" visit or not. It is highly possible that data on one-day visitors who travel between Slovenia and neighbouring countries included many of those that are otherwise not taken into account within tourism statistics (e.g. daily work migrants, truck drivers in transit, etc.).

8 PUBLISHING

SiStat Database: Tourism - Travels of Resident Population - [Users of mobile services and their travels](#) (absolute data).

SiStat Database: Tourism - Travels of Resident Population - [Users of mobile services and their travels](#) (absolute data).

Experimental statistics (Tourism): »Use of mobile operators' data for tourism purposes«. Absolute data and shares are published.

The data are published as experimental 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

There are no breaks in time series, so all points in time are comparable.

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.