



METHODOLOGICAL EXPLANATION

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INDEX OF SERVICE AND TRADE PRODUCTION (STOR-IO/M)

This methodological explanation relates to the data releases:

- Index of service and trade production, Slovenia, monthly (First Release)



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1 PURPOSE

The purpose of the statistical survey Index of service and trade production (STOR-IO/M) is to monitor current monthly changes of production in these activities. The goal of the monthly estimation is early detection of changes in economic development. The index of service activities is suitable for short-term observation and analyses of economic development.

2 LEGAL FRAMEWORK

- [Regulation \(EU\) 2019/2152 of the European Parliament and of the Council of 27 November 2019 on European business statistics, repealing 10 legal acts in the field of business statistics](#)
- [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 production of enterprises whose principal activity is classified into wholesale and retail trade, repair of motor vehicles and motorcycles, accommodation and food service activities, transportation and storage, information and communication, real estate activities, professional, scientific and technical activities, and administrative and support service activities. For more see chapter about classifications. In most cases, data on turnover refer to the total enterprise turnover. However, for some major enterprises, turnover is observed at the level of kind of activity units (KAU). Turnover is observed according to enterprises activity based on NACE Rev. 2.

4 SELECTION OF OBSERVATION UNIT

The observation unit is an enterprise. Some major enterprises are observed at a more detailed level, i.e. at the level of kind of activity units (KAU). These enterprises divide their turnover among main and one or more secondary activities, which is then included in suitable activity.

The basis for calculating the production index in service and trade activities are the data on the units that are observed in the surveys Monthly report on service activities (STOR/M), Retail trade, sale and maintenance of motor vehicles (TRG/M) and Wholesale (TRG-D/M). Observation units in these surveys are selected based on threshold coverage. The criteria for the definition of units included in the surveys are the principal registered activity, annual turnover of the enterprise and the number of persons in paid employment according to the Statistical Register of Employment. The surveys cover all enterprises whose

main activity is classified into one of the service activities within the sections G, H, I, J, L, M and N of NACE Rev. 2, that:

- have annual turnover higher than EUR 180,000 for the units from previous coverage or EUR 300,000 for newly selected units,
- have annual turnover higher than EUR 90,000 and more than 2 persons in paid employment for the units from previous coverage or EUR 150,000 and more than 2 persons in paid employment for newly selected units,
- have more than 5 persons in paid employment.

Data on employed persons are obtained from the Statistical Register of Employment (SRDAP). These surveys include approximately 18,700 units.

5 SOURCES AND METHODS OF DATA COLLECTION

Data are collected monthly.

The basis for calculating the production index in service and trade activities are the data of the units that are observed in the statistical surveys on monthly turnover in services and trade. The data are obtained with the statistical surveys: Monthly report on service activities (STOR/M), Retail trade, sale and maintenance of motor vehicles (TRG/M) and Wholesale (TRG-D/M), namely by use of monthly electronic questionnaires.

Deflators are calculated from various price indices (statistical surveys Services producer price indices (CENE-STOR/ČL), Output price indices (ICIPP/M), Import price indices (IUC/M), Consumer price indices and average retail prices (ICŽP) and House price indices (STAN/ČL)). For the calculation of weights, Structural business statistics (SSP/L) data are used. More about data sources for deflators and weights is stated in the methodological explanations for the above mentioned surveys.

In the cases of STOR/M, TRG/M and TRG-D/M statistical surveys, the turnover data are partially collected from the administrative VAT database of the Financial Administration of the Republic of Slovenia. The data are collected via DDV-O forms. These data are available to the Statistical Office approximately 45 days after the reference period.

6 DEFINITIONS

Index of service production measures the volume of sales in selected activities and is derived from turnover at current prices, which is converted into constant prices. Since the intention is to measure changes in the volume of gross output, data on added value from the survey on structural business statistics are used as weights in the calculation of the index of service production.

Turnover comprises the totals invoiced by the observation unit during the reference period, and this corresponds to market sales of goods or services supplied to third parties. Turnover also includes all other charges linked to the buyer, even if these charges are listed separately on the invoice. Turnover excludes VAT and other similar deductible taxes directly linked to turnover as well as all duties and taxes on the goods or services invoiced by the unit. Reduction in prices and discounts must be deducted. The sale for loan is registered in the month of invoicing. Mostly comparable to the above definition is also turnover that is calculated from several items of the VAT return form (DDV-O).

Volume turnover is a turnover at constant prices. The conversion of data from current to constant prices is called deflation. Deflation of turnover in services and trade is carried out using appropriate deflators.

7 EXPLANATIONS

7.1 CLASSIFICATIONS

Results are published according to SKD 2008, the national version of the standard classification, which includes the entire European classification of activities (NACE Rev. 2) but also adds some national subclasses. A more detailed explanation of the classification is available on the following link: <https://www.stat.si/StatWeb/en/Methods/Classifications>.

Activities and codes by the Standard Classification of Activities (NACE Rev. 2) included in survey results

Service activities are covered according to Regulation (EU) 2019/2152 of the European Parliament and of the Council of 27 November 2019 on European business statistics, repealing 10 acts in the field of business statistics.

NACE Rev. 2 ACTIVITIES	NACE Rev. 2 CODES
TRADE and SERVICES – TOTAL	45, 46, 47, 49, 50, 51, 52, 53, 55, 56, 58, 59, 60, 61, 62, 63, 69, 70.2, 71, 73, 74, 78, 79, 80, 81, 82
G Wholesale and retail trade, repair of motor vehicles and motorcycles	45, 46, 47
Wholesale and retail trade and repair of motor vehicles and motorcycles	45
Wholesale trade	46
Retail trade	47
H Transportation and storage	49, 50, 51, 52, 53
Land transport and transport via pipelines	49
Water transport	50
Air transport	51

Warehousing and support activities for transportation	52
Postal and courier activities	53
I Accommodation and food service activities	55, 56
Accommodation	55
Food and beverage service activities	56
J Information and communication	58, 59, 60, 61, 62, 63
Publishing activities	58
Motion picture, video and television programme production, sound recording and music publishing activities	59
Programming and broadcasting activities	60
Telecommunications	61
Computer programming, consultancy and related activities	62
Information service activities	63
L Real estate activities	68
M Professional, scientific and technical activities	69, 70.2, 71, 73, 74
Legal and accounting activities	69
Management consultancy activities	70.2
Architectural and engineering activities; technical testing and analysis	71
Advertising and market research	73
Other professional, scientific and technical activities	74
N Administrative and support service activities	77, 78, 79, 80, 81, 82
Rental and leasing activities	77
Employment activities	78
Travel agency, tour operator reservation service and related activities	79
Security and investigation activities	80
Services to buildings and landscape activities	81
Office administrative, office support and other business support activities	82

7.2 DATA PROCESSING

DATA EDITING

Data were edited with the combination of systematic corrections, individual corrections and imputation procedures as part of STOR/M, TRG/M and TRG-D/M statistical surveys. More about that in methodological explanations for these surveys.

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

WEIGHTING

In calculating the index of service and trade production at higher levels of activities, the value added factor cost data from structural business statistics are used as weights. They are calculated each year immediately after the new value added data are available. Weights for the index of service and trade production for the reference year T are based on structural business statistics data for year T-2.

SEASONAL ADJUSTMENT

Besides unadjusted data series, seasonally adjusted data series are published from January 2010 on, except for L68 Real estate activities, N77 Rental and leasing activities and N81 Services to buildings and landscape activities. Data for these service activities are available since 2015. All seasonally adjusted data series are directly seasonally adjusted.

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

The deflation of turnover in services and trade is carried out using appropriate price indices. Deflation is carried out at the micro level, i.e. each data item is individually divided by the appropriate deflator, and thus (in terms of price changes) all data are converted to the same time point. The main advantage of deflation at the micro level is that we need only one time series of deflators (indices on a fixed base). An appropriate deflator can be a single price index, but sometimes it is necessary to use a combination of several price indices. The deflation of turnover in services and trade takes place at the level of classes and groups, and in some cases at the level of divisions of NACE Rev. 2. Price indices are not all published using the same base year and are therefore recalculated to the same base year during the calculation of the trade turnover

indices.

7.3 INDICES

For each current month compared to the base month (i.e. average of the previous year), individual indices of particular representative NACE Rev. 2 activity group are calculated directly from data on turnover:

$$I_{M/\phi Y-1} = \frac{\sum_{i=1}^N \text{TURNOVER}_M}{\phi \text{TURNOVER}_{Y-1}} * 100$$

whereby:

TURNOVER_M	volume turnover of observation unit i, which belongs to a representative NACE Rev. 2 activity group in month M of current year,
$\phi \text{TURNOVER}_{Y-1}$	average monthly turnover for a representative NACE Rev. 2 activity group of the previous year.

From individual indices, we calculate with weighted arithmetic mean indices at higher levels, i.e. group, division and section indices of NACE Rev. 2:

$$I_{M/\phi Y-1}^{ag} = \frac{\sum_{i=1}^{n_{ag}} I_{M/\phi Y-1} * W}{\sum_{i=1}^{n_{ag}} W}$$

whereby:

$I_{M/\phi Y-1}^{ag}$	index current month / average of the previous year for a higher level,
$I_{M/\phi Y-1}$	index current month / average of the previous year for a representative NACE Rev. 2 activity group,
W	weight for a representative NACE Rev. 2 activity group,
n_{ag}	number of representative NACE Rev. 2 activity groups which belong to a higher level.

Each index at a higher level (the average of the previous year = 100) calculated in this way is a Laspeyres index of fixed type; calculated with weights from the same base period. Weights are based on value added at factor cost from structural business statistics. The weights are changed every year.

Monthly base index, which shows turnover changes in the current month compared to the average turnover of 2021, is calculated indirectly from this index using chain linking. All indices are currently derived and calculated on the basis of the average of 2021.

The published indices for the current month are calculated in the following ways:

- Indices of turnover based 'on the corresponding month of the previous year', which are working day adjusted, are calculated by the following formula:

$$I_{YEAR}_{t,ycal} = \frac{I_{BAS}_{t,ycal}}{I_{BAS}_{t-12,ycal}} * 100$$

- Indices of turnover based 'on the previous month', which are seasonally adjusted, are calculated by the following formula:

$$I_{MON}_{t,sa} = \frac{I_{BAS}_{t,sa}}{I_{BAS}_{t-1,sa}} * 100$$

whereby:

t	month,
$t-1$	previous month,
$t-12$	corresponding month of the previous year,
$I_{YEAR}_{t,ycal}$	the index based on the corresponding month of the previous year, working day adjusted,
$I_{MON}_{t,sa}$	the index based on the previous month, seasonally adjusted,
$I_{BAS}_{t,ycal}$	the index based on average of the base year, working day adjusted,
$I_{BAS}_{t,sa}$	the index based on average of the base year, seasonally adjusted.

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 indices, publishing limitations are determined by the standard errors of the estimates (SE) of the indices. In such cases it holds:

If the standard error (SE) of the estimate of a proportion is

- 10 or below (SE ≤ 10) the estimate is reliable enough and is published without limitations;
- between 10 and up to 30 (10 < SE ≤ 30) the estimate is less reliable and is flagged for caution with letter M;
- over 30 (SE > 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

Data that are statistically protected to respect the confidentiality of reporting units are replaced with the letter »z«.

From the data for the current month, which we compare to the data for the previous month, influences of the season and calendar are eliminated. Data for the current month that are compared to data for the same month of the previous year are adjusted to the number of working days.

With the release for January 2024, the base year changed to 2021 and the observation unit changed to KAU (Kind of Activity Unit). The data therefore differ from previously published data.

8 PUBLISHING

- SiStat Database: [Trade and services](#) - Trade or Other services - [Indices of service and trade production](#). Production indices are published as the original and adjusted data (data are seasonally and working day adjusted). Data are published according to the Standard Classification of Activities (NACE 2008).
- First Release (Trade and Services, Trade, Other Services): »Index of service and trade production, Slovenia, Monthly«.
- [Statobook](#)
- EUROSTAT (Statistical Office of the European Union)

9 REVISION OF THE DATA

9.1 PUBLISHING OF PRELIMINARY AND FINAL DATA

Data for the last 10 months are provisional. With each release the data for the last 10 months can be corrected and supplemented with new data.

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

Data for all activities, with the exception of L68 Real estate activities, N77 Rental and leasing activities and N81 Services to buildings and landscape activities, are available from 2010 onwards. Data for the mentioned activities are available from 2015 onwards.

With the release for January 2024, we transitioned to the new base year 2021 and a new observation unit – kind of activity unit (KAU). The data were revised until January 2021 inclusive and are published at the level of the new observation unit. The data before that period differ from them and are published at the enterprise level.

10 OTHER METHODOLOGICAL MATERIALS

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

- Questionnaire:

- Poslovne in druge storitvene dejavnosti, (STOR/M, only in Slovene)

Theme: Trgovina in storitve, Subtheme: Ostale storitve

- Trgovina na drobno, trgovina z motornimi vozili in popravila motornih vozil, (TRG/M, only in Slovene)

Theme: Trgovina in storitve, Subtheme: Trgovina

- Trgovina na debelo, (TRG-D/M, only in Slovene)

Theme: Trgovina in storitve, Subtheme: Trgovina

- Quality report for the survey:

- Index of service and trade production (STOR-IO/M))

Theme: Trade and services, SubTheme: Other services

- Methodological explanations:

- Turnover in service activities

Theme: Trade and Services, Subtheme: Other Services

- Turnover in distributive trade

Theme: Trade and Services, Subtheme: Trade

- Services producer price indices

Theme: Prices and Inflation, Subtheme: Prices in Manufacturing and Services

- Output price indices

Theme: Prices and Inflation, Subtheme: Prices in Manufacturing and Services

- Import price indices

Theme: Prices and Inflation, Subtheme: Prices in Manufacturing and Services

- Consumer price indices and average retail prices

Theme: Prices and Inflation, Subtheme: Consumer Prices - Inflation

- House price indices

Theme: Prices and inflation, Subtheme: Real estate prices

- Structural business statistics

Theme: Enterprises, Subtheme: Enterprise Structure and Performance