



## METHODOLOGICAL EXPLANATION

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# TOTAL MARKET PRODUCTION INDEX (PROIZ-SK/M)

This methodological explanation relates to the data releases:

- Total market production index, Slovenia, monthly (First Release)



April 2024



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## 1 PURPOSE

The purpose of publishing data on the total market production index is to show monthly changes in production in all market activities.

## 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 production of enterprises whose principal activity is classified into mining and quarrying, manufacturing, electricity, gas, steam and air conditioning supply, construction, 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.

Units are described according to the Standard Classification of Activities, version 2008 (SKD 2008). Data for wholesale and retail trade and data for services refer to the total enterprise turnover, including turnover from potential side activities not related to the activities mentioned above.

## 4 SELECTION OF OBSERVATION UNIT

Observation units are enterprises and their units performing one or more activities for sections Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), Construction (F), Wholesale and retail trade, repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I), Information and communication (J), Real estate activities (L), Professional, scientific and technical activities (M) and Administrative and support service activities (N) of the Standard Classification of Activities (version 2008).

The main activity of the enterprise is the statistical activity defined in the Statistical Business Register for statistical purposes, and is in some cases different from the registered activity defined in the Business Register of Slovenia, kept by AJPES. The statistical activity is determined for the major units which have different main activity based on existing statistical data than is registered main activity.

Observation units are chosen in the surveys based on threshold coverage. Approximately 21,100 observation units are included in the four surveys from which we draw data for calculating the total market production index.

## 5 SOURCES AND METHODS OF DATA COLLECTION

Data are collected monthly.

Data are collected through online questionnaires within the surveys Turnover and value of stocks in industry (IND-PN/M), Survey on construction (GRAD/M), Monthly report on service activities (STOR/M), Retail trade, sale and maintenance of motor vehicles (TRG/M) and Wholesale (TRG-D/M).

In the cases of STOR/M, TRG/M and TRG-D/M 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

**Total market production index** is a monthly synthesis index that monitors the movement of the volume of sales of market activities. It includes the movement of the industrial production index, the index of value of construction put in place and the index of service and trade production.

**Industrial production index (IPI)** reflects developments in value added and is calculated from turnover and stocks of finished and unfinished goods. It is observed for sections Mining and quarrying (B), Manufacturing (C) and Electricity, gas, steam and air conditioning supply (D), excluding group 35.3, according to SKD 2008.

**Value of construction put in place** covers the value of the following construction works:

- Organisation of the execution of building projects, i.e. services of collecting financial, technical and other material means for the construction of residential and non-residential buildings to be sold afterwards
- Construction of residential and non-residential buildings
- Civil engineering works
- Specialised construction activities: demolition and site preparation, construction installation activities, building completion and finishing (plastering, joinery installation, floor and wall covering, painting and glazing), roofing activities and other specialised construction activities.

The value of construction put in place is given at current prices, without value added tax, in EUR (in whole figures without cents). It does not cover the costs of purchasing the land, moving costs and costs of rents for the time of replacement construction, project services, and costs of interior design.

**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.

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

Activities and codes by the Standard Classification of Activities (NACE Rev. 2) included in survey results are Mining and quarrying (B), Manufacturing (C), Electricity, gas, steam and air conditioning supply (D), Construction (F), Wholesale and retail trade, repair of motor vehicles and motorcycles (G), Transportation and storage (H), Accommodation and food service activities (I), Information and communication (J), Real estate activities (L), Professional, scientific and technical activities (M) and Administrative and support service activities (N).

### **7.2 DATA PROCESSING**

#### **DATA EDITING**

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

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

#### **WEIGHTING**

In calculating the total market production index, 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 total market production index 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 2011 on (base year 2021). 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](#).

## 7.3 INDICES

The basic index, which is calculated from four other indices, is the index for the current month of the current year to the average of the previous year. All other indices that are still being published are calculated indirectly from this index through chaining procedures.

The index for the current month of the current year to the previous year's average is thus calculated from four "sectoral" indices (industrial production index, value of construction put in place index, index of service production and index of trade production) for the current month to the previous year's average as a weighted arithmetic mean of the sectoral indices. If the sectoral basic indices are marked as  $I_{M/\emptyset L-1}^i$  ( $i=1, \dots, 4$ ) and the corresponding weights of each sector as  $w^i$ , then the formula for calculating is:

$$I_{M/\phi L-1} = \frac{\sum_{i=1}^4 w^i \cdot I_{M/\phi L-1}^i}{\sum_{i=1}^4 w^i}$$

From the basic index we then calculate the base indices by chaining, the base year is 2021:

$$I_{M/\phi 2021} = I_{M/\phi L-1} \cdot \frac{\phi L - 1}{\phi L - 2} \cdot \frac{\phi L - 2}{\phi L - 3} \dots \frac{\phi 2022}{\phi 2021}$$

Relation between  $\phi L-1$  in  $\phi L-2$  is calculated as the average of all monthly indices in the year L-1 on the average of the previous year (basic indices in the previous year).

The base index tells us by how much the average sales volume in the current month changed compared to the average sales volume in 2021.

All remaining published indices are derived and calculated from the time series of base indices, using the formulas presented below.

- 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,
$I\_YEAR_{t,year}$	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,
$I\_BAS_{t,year}$	the index based on average of the base year, working day adjusted.

## 7.4 PRECISION

Precision is not calculated.

## 7.5 OTHER EXPLANATIONS

The total market production indices are published in a form of indices:

- fixed base indices (current month compared to the average of 2021, which is a base year),
- movable base indices (current month compared to the previous month, compared to the same month of the previous year and the monthly average of the current year compared to the monthly average (the same months) of the previous year).

At recalculations slight differences compared to the data published in other publications can appear due to the rounding of indices.

## 8 PUBLISHING

- SiStat Database:

[Industry](#) – Production and turnover in industry - [Indices of industrial production](#)

[Construction](#) – Construction works and costs - [Monthly data on construction](#)

[Trade and services](#) – 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 (Industry, Production and Turnover in Industry; Construction, Construction Works and Costs; Trade and Services, Other Services): »Total market production index, Slovenia, Monthly«.



## 9 REVISION OF THE DATA

### 9.1 PUBLISHING OF PRELIMINARY AND FINAL DATA

Data for the previous year are provisional until October of the current year.

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 are published from January 2011 onwards. There are no breaks in the time series.

A methodological explanation of data revision is available on the website: <https://www.stat.si/dokument/5296/RevidiranjeStatisticnihPodatkovMPsplosna.pdf>

## 10 OTHER METHODOLOGICAL MATERIALS

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

- Questionnaire (Slovene only):
  - Prihodek od prodaje in vrednosti zalog v industriji (IND-PN/M)

Theme: Industrija, Subtheme: Proizvodnja in prihodki v industriji

- Questionnaire (Slovene only):
  - Gradbena dejavnost (GRAD/M)

Theme: Gradbeništvo, Subtheme: Gradbena dela in stroški

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

Theme: Trgovina in storitve, Subtheme: Ostale storitve

- Questionnaire (Slovene only):

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

Theme: Trgovina in storitve, Subtheme: Trgovina

- Questionnaire (Slovene only):
  - Trgovina na debelo (TRG-D/M)

Theme: Trgovina in storitve, Subtheme: Trgovina

- Quality report for the survey:
  - Prihodek Turnover and value of stocks in industry (IND-PN/M)

Theme: Industry, SubTheme: Production and Turnover in Industry

- Quality report for the survey:
  - Construction activity (GRAD/M)

Theme: Construction, SubTheme: Construction Works and Costs

- 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

- Methodological explanations:
  - Turnover in distributive trade

Theme: Trade and Services, Subtheme: Trade

- Methodological explanations:
  - Services producer price indices

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

- Methodological explanations:
  - Output price indices

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

- Methodological explanations:

- Import price indices

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

- Methodological explanations:

- Consumer price indices and average retail prices

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

- Methodological explanations:

- Indices of the value of construction put in place

Theme: Construction, Subtheme: Construction Works and Costs

- Methodological explanations:

- Turnover and value of stocks in industry

Theme: Industry, Subtheme: Production and Turnover in Industry

- Methodological explanations:

- House price indices

Theme: Prices and inflation, Subtheme: Real estate prices

- Methodological explanations:

- Structural business statistics

Theme: Enterprises, Subtheme: Enterprise Structure and Performance