

NOTES ON METHODOLOGY

Industrial production volume indices are presented on an interannual chain basis and on the fixed base year 2015 = 100, in line with the 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. The Croatian Bureau of Statistics submits the industrial production index for the Republic of Croatia to Eurostat on a monthly basis and publishes it on Eurostat's web site <http://ec.europa.eu/eurostat/euroindicators> for the principal European economic indicators (the so-called PEEIs) presented on the fixed base year 2021 = 100, which enables a direct comparison of the development of industrial production between the Member States. The industrial production volume index for the Republic of Croatia is fully harmonised with the European standards.

We kindly inform users that the First Release IND-2024-3-1 is published around the 29th day in a month at 11 o'clock for the indices from the previous reference month. Precise publishing dates are listed in the Calendar of Statistical Data Issues for 2024, which is available, besides in the printed form, on the website of the Croatian Bureau of Statistics at <https://podaci.dzs.hr/en/>.

Legal and methodological framework

The presented indices were calculated on the basis of the data collected in the Monthly Survey on Industrial Production and Persons Employed (IND-1/KPS/M form) in 2024, which is directly carried out by the Croatian Bureau of Statistics on the basis of the Official Statistics Act (NN, No. 25/20).

The concepts and definitions used in the IND-1/KPS/M Survey are specified in the Statistical Standards for the Monthly Survey on Industrial Production and Persons Employed (IND-1/KPS/M form) published on the website of the Croatian Bureau of Statistics at <https://dzs.gov.hr/classifications/670>. The concepts and definitions are harmonised with the EU concepts and definitions and especially with the Regulation (EU) 2019/2152 of the European Parliament and of the Council and the Commission Regulation (EU) 2020/1197.

Scope and coverage

The IND-1/KPS/M Survey covers enterprises and parts thereof employing 20 or more persons (the so-called 'cut-off sample) and performing one or several industrial activities listed in the NKD 2007. sections B Mining and quarrying, C Manufacturing and D Electricity, gas, steam and air conditioning supply, that is, their divisions 05 – 35 except group 35.3 (NN, Nos 58/07 and 72/07).

Reference period and data collection method

The reference period for data collection is one month and is identical to a calendar month. The data collection method used in 2024 is a web-based application (the so-called CAWI). The reporting units enter data directly into the IND-1/KPS/M e-form, which is available on the website of the Croatian Bureau of Statistics at <https://podaci.dzs.hr/hr/obrasci/industrija/>.

The time schedule for data collection is between 1st and 15th day in a month for the previous reference month data.

INDUSTRIAL PRODUCTION INDICES

Definition of indicator

The industrial production volume index is an important short-term indicator of a business cycle that measures the monthly results of the industrial sector. Taking into account its periodicity and its rapid availability, it is a central and an up-to-date indicator of the development of the industrial sector, which is one of the most volatile components of economy.

Industrial production volume indices are indices of finished industrial products defined by the Nomenclature of Industrial Products (NIPUM 2024.).

A finished product is considered every product that reached a certain level in the production process and listed in the NIPUM 2024. under a separate code and heading.

Calculation method¹⁾

Industrial production volume indices for various levels of the NKD 2007. are calculated in two stages according to the Laspeyres formula. In the first stage, indices are calculated from quantity data on the production of individual products according to the NIPUM 2024. and an adequate weighting coefficient, which represents an estimated value added of individual products. In the second stage, all indices of groups and higher levels are weighted with the shares of the value added of the individual activities of industrial production by the NKD 2007. levels. In this way, the relative importance of individual levels is defined and, at the same time, different levels of coverage are levelled.

MIGs 2009. aggregates

Indices for MIGs 2009. aggregates are calculated in the same way, according to the predominant end-use of products within the same NKD 2007. activity group. Since January 2009, new definitions have been applied for MIGs aggregations in the calculation of aggregated indices in order to facilitate further harmonisation with the EU statistical standards.²⁾

The grouping at the level of the NKD 2007. groups or divisions according to the MIGs 2009., using alphabetic marks of abbreviations, was done as follows:

- AI Intermediate goods: the NKD 2007. divisions and groups: 07 – 09, 10.6, 10.9, 13.1 – 13.3, 16, 17, 20.1 – 20.3, 20.5, 20.6, 22 – 24, 25.5 – 25.7, 25.9, 26.1, 26.8, 27.1 – 27.4 and 27.9
- AE Energy: the NKD 2007. divisions: 05, 06, 19 and 35 (excluding 35.3)
- BB Capital goods: the NKD 2007. divisions and groups: 25.1 – 25.4, 26.2, 26.3, 26.5, 26.6, 28, 29, 30.1 – 30.4, 32.5 and 33
- CD Consumer durables: the NKD 2007. divisions and groups: 26.4, 26.7, 27.5, 30.9, 31, 32.1 and 32.2
- CN Consumer non-durables: the NKD 2007. divisions and groups: 10.1 – 10.5, 10.7, 10.8, 11, 12, 13.9, 14, 15, 18, 20.4, 21, 32.3, 32.4 and 32.9.

Weighting system

The weighting coefficients of individual products of the NIPUM 2024. used in the calculation of industrial production index represent the value added to the unit production of a respective product. They are calculated on the basis of unit values of the PRODCOM survey on industrial production for 2021 and are revised every five years.

The weighting coefficients used in the period from 2018 to 2023 were calculated on the basis of the PRODCOM Survey on Industrial Production for 2015, while those used in the period from 2012 to 2017 were calculated on the basis of the PRODCOM Survey on Industrial Production for 2010.

In the Republic of Croatia, the structure of industrial activities (division structure) was calculated on the basis of the gross value added of factor costs by the pure activity principle in 2021. It was calculated on the basis of the 2022 annual statistical results of the Structural Business Survey carried out by the Croatian Bureau of Statistics by processing annual results taken over from the administrative data of Fina – the Annual Accounts of Industrial Enterprises in 2022. It was further corrected by the results of the PRODCOM Survey on Industrial Production for 2022 and then by the industrial production volume indices for 2023. The division structure is updated at the beginning of every year for the calculation of the industrial production volume indices in the current year.

Presentation and interpretation of movements in volume of industrial production

The presentation and the interpretation of the industrial production volume indices are in line with Eurostat's requirements for the presentation of short-term business indicators and with the Regulation (EU) 2019/2152 of the European Parliament and of the Council.

The movements of the industrial production volume are presented and interpreted in relation to growth rates calculated on the basis of seasonally adjusted and working-day adjusted indices. Seasonally adjusted indices are used for the monthly comparison of movements of the industrial production volume and working-day adjusted indices for the annual comparison.

Seasonal and working-day adjustment method

Seasonal and working-day adjustment has been done by using the X13 ARIMA method on the monthly index series, which starts with the January 1998 index for the total industry (sections B, C and D, excluding group 35.3 of the NKD 2007.) for the divisions of the NKD 2007. as well as for the MIGs 2009. The effect of a random component in the seasonal adjustment process of time series of indices has been excluded.

Due to the character of the implemented seasonal adjustment method, the extension of the index series by adding new monthly observations for each new month could cause subsequent corrections of the already published seasonally and working-day adjusted indices and trend for several previous months.

Notice concerning the terminology used

In Croatian language, the term "kalendarsko prilagođavanje" (calendar adjustment) is not the literal translation of the term "working-day adjustment" in English which means "adjustment for the number of working days". It is used in order to prevent misunderstandings by national users.

The term "working-day adjustment" in short-term business statistics actually refers to the calendar adjustment, but due to specific Eurostat's requirements for short-term statistics, the term "working-day adjustment" is used instead.

Seasonally and working-day adjusted indices

The term "seasonally and working-day adjusted" indices is used to indicate that gross indices are adjusted for both seasonal and working-day effects. In line with Eurostat's requirements for short-term business indicators, the data that are compared to those of the previous month (that is, monthly comparison) are presented in a seasonally and working-day adjusted form of industrial production indices or growth rates calculated from them.

Working-day adjusted indices

The term "working-day adjusted indices" is used to indicate that gross indices are adjusted only for working-day effects in line with Eurostat's requirements for short-term business indicators, while data compared to those of the same month of a previous year (that is, annual comparison) are presented in a working-day adjusted form of industrial production indices or growth rates calculated from them.

1) Additional information is available in the Studies and Analyses – Short-Term Indicators on Industry, No. 85, Zagreb, 1999, CBS.

2) Commission Regulation (EU) 2020/1197 of 30 July 2020 laying down technical specifications and arrangements pursuant to Regulation (EU) 2019/2152 of the European Parliament and of the Council as regards the definitions of Main Industrial Groupings (MIGs).

Notice

The Croatian Bureau of Statistics has changed the package and the method of seasonal adjustment of industrial production time series of indices and other short-term indicators. Up until now, the TRAMO-SEATS method was used in the Demetra (version 2.2.) package. Since January 2016, the new X13 ARIMA method in the new JDemetra+ (version 2.0.0. or newer version after they have been officially available) package has been used. Due to this, there was a change in the already published seasonal and working-day adjusted values and corresponding change rates on whole time series.

Additional information can be found in the press release of the Croatian Bureau of Statistics concerning the introduction of a new method of seasonal adjustment of time series, which was published on the web pages of the Croatian Bureau of Statistics at <https://podaci.dzs.hr/en/>.