QUALITY REPORT FOR STATISTICAL SURVEY

Monthly Survey on Industrial Production and Persons Employed (IND-1/KPS/M) for 2023

Organisational unit: Industrial Short-Term Business Statistics Unit

Prepared by: Slavica Peraić

September 2024

0. Basic information

- Purpose, goal, and subject of the survey

The survey presents the monthly developments in the industrial production volume index, which is an important short-term indicator of a business cycle that measures the monthly results of the industrial sector. It also presents the monthly developments in the indices of stocks, persons employed and labour productivity in industry.

- Reference period

Month

- Legal acts and other agreements

The legal basis at the national level is the Official Statistics Act (NN, No. 25/20), which defines the responsibilities for the collection, processing and dissemination of data. The Croatian Bureau of Statistics is the main producer, disseminator and coordinator of the official statistics system in the Republic of Croatia. The goals of official statistics are defined by the Official Statistics Act (NN, No. 25/20). Producers of official statistics have the right to collect data from all available sources. The concepts and terms are harmonised with the concepts and terms of the EU, especially with Regulation (EU) 2019/2152 of the European Parliament and of the Council and Commission Implementing Regulation (EU) 2020/1197. Statistical Activities are defined by the Programme of Statistical Activities of the Republic of Croatia 2021 − 2027 and the Development Strategy of Official Statistics of the Republic of Croatia 2021 – 2030.

- Classification system

Nomenclature of Industrial Products for the Monthly Survey on Industrial Production – NIPUM 2023

National Classification of Activities, 2007 version - NKD 2007 (NN, Nos 58/07 and 72/07)

Classification of Products by Activities of the Republic of Croatia, 2008 version - KPD 2008 (NN, No. 108/08)

- Statistical concepts and definitions

The industrial production volume index is a central and up-to-date indicator of the industrial sector development. It is 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 2023 and the corresponding weighting coefficient. 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. Indices of producers' stock of finished products are the chain volume indices of finished products as defined in the Nomenclature of Industrial Products – NIPUM 2023, which are calculated on the basis of the data on the state of the stocks of finished products on the last day of the reporting month and the corresponding weighting coefficient. Indices of persons employed show the dynamics of the number of persons employed in industrial activities of enterprises, excluding persons employed in non-industrial activities of the same enterprise. The labour productivity index is calculated as a relation between the volume index of industrial production from the beginning of the year until the end of the reference month and the level index of the number of persons employed in industry, also from the beginning of the year to the end of the reference month. The level index presents the comparison of the current period with the same period of the previous year.

- Statistical units

Reporting units: industrial enterprises and KAUs of non-industrial enterprises engaged in one or more industrial activities.

Observation units: enterprises and KAU

- Statistical population

The population is defined and continuously updated according to the Statistical Business Register (SBR) at the beginning of each year and during the reporting period for newly established industrial units from all available sources. The total population includes about 22 000 industrial enterprises and KAUs in NKD 2007. sections: B Mining and quarrying, C Manufacturing and D Electricity, gas, steam and air conditioning supply, that is, divisions 05 - 35 (except group 35.3). The target population of industrial enterprises and KAUs employing 20 or more persons (the so-called 'cut-off' sample) includes 1 969 enterprises in NKD 2007 sections, which were covered by the survey in 2023. The coverage of statistical units in some activities also includes industrial enterprises and KAUs employing less than 20 persons if they have specific industrial production important for the final results of the survey.

1. Relevance

1.1 Data users

- Internal users from the Croatian Bureau of Statistics: Macroeconomic Statistics Directorate

- National users: ministries and state administration bodies, Croatian National Bank, economic analysts, economic and research institutes, Croatian Chamber of Economy, other business associations, business entities, the media, the interested public

- International users: European Central Bank

1.1.1 User needs

The industrial production index measures the monthly performance of industry in the Republic of Croatia. Due to its periodicity, quick availability and detailed breakdown by industrial activity sections, it is a central and up-to-date indicator of business development in the industrial sector. National users require detailed data on industrial production trends (specific activity) and available time series for the purpose of economic analysis, market analysis, monitoring and decision-making in business, and for the purposes of research and writing academic papers (students).

1.1.2 User satisfaction

The first user satisfaction survey of the Croatian Bureau of Statistics was conducted in 2013, the second one in 2015, and the last one at the end of 2023. The survey results can be checked on the website of the Croatian Bureau of Statistics https://dzs.gov.hr/highlighted-themes/quality/user-satisfactionsurveys/686 .

1.2. Completeness

The compilation and dissemination of the industrial production index is in line with relevant Eurostat's requirements for short-term statistics.

1.2.1 Data completeness rate
The data completeness rate is: 100%

2. Accuracy and reliability

2.1. Sampling error

The survey is based on the cut-off sample.

2.1.1 Sampling error indicators
Indicator for this survey is not applicable.

2.2. Non-sampling error

Errors in estimations that cannot be linked to the sample selection is the unit non-response (unit non-response rate is approximately 0.8%). In that case, data are estimated but have no impact on key results.

2.2.1. Coverage error

The target population of the survey are all industrial enterprises and KAUs employing 20 or more persons (the so-called 'cut-off' sample) in NKD 2007 sections: B Mining and quarrying, C Manufacturing and D Electricity, gas, steam and air conditioning supply (except group 35.3), which meet the criterion of coverage of 90% of gross value added of each NKD 2007 industry group (particularly small industries like bakeries, printing offices, wineries, etc.).

2.2.2. Over-coverage rate

Over-coverage rate is: 1,7%

The data for the calculation of this indicator is available at the end of each year when preparing the base for new processing (next year), units that have stopped working or are no longer engaged in industrial activity are excluded.

2.2.3. Measurement error

Data collection via an electronic form on the website of the Croatian Bureau of Statistics has greatly reduced the possibility of calculation errors, incorrect codes and units of measurement. When sending the form, various warnings are included if there is a visible deviation from previous months. Errors made by companies when entering data that do not later pass data verification can occur, and are resolved by contacting the person in charge of filling out the form.

2.2.4. Non-response error

In case of non-response of a unit, data are estimated but have no impact on key results.

2.2.5. Unit non-response rate

%

Unweighted non-response rate: domain	Domain value	Comment	January	February	March	April	May	June	July	August	September	October	November	December	Average
Croatia	Croatia		0,6	1,3	1,6	1,1	1,3	1,3	1,9	1,2	1,1	1,0	1,0	1,5	1,2

2.2.6. Item non-response rate

%

Unweighted non-response rate for certain variables: Variable	Domain	Domain value	Comment	January	February	March	April	May	June	July	August	September	October	November	December	Average
Non-response rate for all variables	Croatia	Croatia		0,6	1,3	1,6	1,1	1,3	1,3	1,9	1,2	1,1	1,0	1,0	1,5	1,2

2.2.7. Processing error

The classification according to the NKD is taken over from the annual PRODCOM survey and the Statistical Business Register (SBR). At the beginning of each year, the compatibility of the type of production and the indicated NKD activity is checked for the companies included in the scope of the survey, thus reducing incorrect classification according to the NKD classification. Data editing is established for data.

2.2.8. Imputation rate

Indicator for this survey is not applicable.

2.2.9. Model assumption error

The estimate calculation model is not applied.

2.3. Data revision

2.3.1. Data revision – policy

The users of statistical data are informed about revisions on the website of the Croatian Bureau of Statistics, on the link – General Revision Policy of the CBS. Data are disseminated as final and as such they are not subject to any revision.

2.3.2. Data revision – practice

Data are disseminated as final and as such they are not subject to any revision.

2.3.3. Data revision – average size

Indicator for this survey is not applicable.

2.4. Seasonal adjustment

Seasonal and working-day adjustment has been done by using the X13 ARIMA method in the new JDemetra+ software package. The term "seasonally and working-day adjusted indices" is used to indicate that gross indices are adjusted for both seasonal and working-day effects, while 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.

3.   Timeliness and Punctuality

3.1. Timeliness

Data publishing: T + 29 - refers to days.

3.1.1. Time lag – first results

Time lag - first results is: T + 30 days

3.1.2. Time lag – final results

Time lag - final results is: T + 30 days

3.2. Punctuality

All First Releases are published as announced in the Calendar of Statistical Data Issues.

3.2.1. Punctuality – delivery and publication

Delivery and publication is: 1

4.   Accessibility and clarity

Monthly First Releases, Statistics in Line, annual Statistical Report Short-Term Indicators of Industry-Industrial Production, Producer Prices and Turnover of Industry.

Data are available in electronic form on the website of the Croatian Bureau of Statistics.

4.1. News release

Monthly First Release IND-2023-3-1 Industrial Production Volume Index and Indices of Stocks, Persons Employed and Labour Productivity in Industry

4.2. On-line database

On the website of the Croatian Bureau of Statistics under the Data section: PC Axis Database and STS Database

4.3. Micro-data access

The conditions under which certain users can access microdata are regulated by the Ordinance on Conditions and Terms of Access and Use of Confidential Statistical Data of the Croatian Bureau of Statistics for Scientific Purposes (OG, No. 5/23).

4.4. Documentation on methodology

The description of the methodology and data sources can be found at the end of every First Release and Statistical Report: monthly First Release IND-2023-3-1 Industrial Production Volume Index and Indices of Stocks, Persons Employed and Labour Productivity in Industry, and annual report Short-Term Indicators of Industry - Industrial Production, Producer Prices and Turnover of Industry. On the website of the Croatian Bureau of Statistics, there are also the following methodologies published in Narodne novine (the Official Gazette of the Republic of Croatia): Statistical standards for the Monthly Survey on Industrial Production and Persons Employed (IND-1/KPS/M), including the Nomenclature of Industrial Products for the Monthly Survey on Industrial Production, NIPUM 2023.

5. Coherence and comparability

5.1. Asymmetry for mirror flows statistics

The indicator for this survey is not applicable.

5.2. Comparability - over time

Since 1998.

5.2.1. Length of comparable time series

Length of comparable time series is 312 (January 1998 – December 2023)

Length of comparable time series is: domain	Domain value	Comment	January	February	March	April	May	June	July	August	September	October	November	December
Croatia	Croatia		301	302	303	304	305	306	307	308	309	310	311	312

5.2.2. Reasons for break in time series

Main revisions are planned to be carried out every five years in relation to the change of the reference year due to the change of the National Classification of Activities (NKD).

5.3. Coherence – subannual and annual statistics

Indicator for this survey is not applicable.

5.4. Coherence – national accounts

Indicator for this survey is not applicable.

5.5. Coherence – administrative sources

Indicator for this survey is not applicable.

6. Cost and burden

6.1. Cost

Data collection is based on an online survey; therefore, the costs are minimal.

6.2. Burden

The burden on reporting units has been greatly reduced by switching to an online survey and filling in an electronic form in which the main features (name of the reporting unit, product codes and units of measurement) are previously filled in.