REPUBLIC OF CROATIA

CROATIAN BUREAU OF STATISTICS

QUALITY REPORT FOR STATISTICAL SURVEY

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

for 2016

Organisational unit: Industrial Short-Term Business Statistics Unit
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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 acts for the Monthly Survey on Industrial Production and Persons Employed (IND-1/KPS/M) are the following:

- Council Regulation (EC) No. 1165/98 of 19 May 1998 concerning short-term statistics (OJ L 162, 5. 6. 1998)
- Regulation (EC) No 1158/2005 of the European Parliament and of the Council of 6 July 2005 amending Council Regulation (EC) No 1165/98 of 19 May 1998 concerning short-term statistics (OJ L 191, 22. 7. 2005)
- Commission Regulation (EC) No 1503/2006 of 28 September 2006 implementing and amending Council Regulation (EC) No 1165/98 concerning short-term statistics as regards definitions of variables, list of variables and frequency of data compilation (OJ L 281, 12. 10. 2006)
- Commission Regulation (EC) No 656/2007 of 14 June 2007 amending Regulation (EC) No 586/2001 on implementing Council Regulation (EC) No 1165/98 concerning short-term statistics as regards the definition of main industrial groupings (MIGs), (OJ L 155, 15. 6. 2007
- Commission Regulation (EC) No 472/2008 of 29 May 2008 implementing Council Regulation (EC) No 1165/98 concerning short-term statistics as regards the first base year to be applied for time series in NACE Revision 2 and, for time series prior to 2009 to be transmitted according to NACE Revision 2, the level of detail, the form, the first reference period, and the reference period (OJ L 140, 30. 5. 2008)
- Commission Regulation (EC) No 329/2009 of 22 April 2009 amending Council Regulation (EC) No 1165/98 concerning short-term statistics as regards the updating of the list of variables, the frequency of compilation of the statistics and the levels of breakdown and aggregation to be applied to the variables (OJ L 103, 23. 4. 2009)

Other international standards:

- Methodology of Short-Term Business Statistics, Eurostat, ISSN 1725-0099, European Communities, Luxembourg, 2006
- International Recommendations for Industrial Production Index, UN, New York, January 2009
- Recommendations for Publishing STS Data, Eurostat, January 2009
- ESS Guidelines on Seasonal Adjustment, Eurostat, Methodology and Working Materials, ISSN 1977-0375, European Communities, Luxembourg, 2009

- Classification system

Nomenclature of Industrial Products for the Monthly Survey on Industrial Production, 2009 version – NIPUM 2009. (NN, No 11/09)
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)

- 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 2009 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 2009., 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 KAUs

- Statistical population

The population is defined and continuously updated according to the Statistical Business Register 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 21 850 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 1 922 enterprises in NKD 2007. sections, which were covered by the survey in 2016.

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

Data users are:

- internal − users from the Croatian Bureau of Statistics: National Accounts 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, and international users: policy DGs of the European Commission, 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

User satisfaction is measured by the user satisfaction survey of the Croatian Bureau of Statistics. Two surveys were conducted so far (2013 and 2015). Detailed results of the survey for 2015 are available on the website of the Croatian Bureau of Statistics under the Quality section:
http://www.dzs.hr/Hrv/international/Quality_Report/Quality_Report_Documents/Quality_Report_Satisfaction_Survey.pdf.

1.2. Completeness

The compilation and dissemination of the industrial production index is in line with relevant Eurostat's STS requirements.

1.2.1 Data completeness rate

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

The indicator for this survey is not applicable.

2.1.2 Bias in sample selection process

Bias in sample selection process for certain statistics:

%

Statistics	Coverage	Value of coverage	February	March	April	May	June	July	August	Septem-ber	October	Novem-ber	Decem-ber	Average
Short-term business statistics	Croatia	Croatia	0.9128	0.9123	0.9122	0.9122	0.9123	0.9122	0.9122	0.9122	0.9121	0.912	0.912	0.9123

According to the Statistical Business Register data, the total population includes 21 850 industrial enterprises and KAUs. The target population (the so-called cut-off sample) for 2016 includes about 1 922 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).

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 1.3%). 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 the NKD 2007. activity 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 1.2%.

Data for the calculation of this indicator are available at the end of each year when units that have ceased to operate or are no longer engaged in industrial activity are excluded when arranging the database for the new processing (the following year).

2.2.3 Measurement errors

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 pass data verification afterwards can occur, and are resolved by contacting the person in charge of filling out the form.

2.2.4 Non-response errors

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 is

%

Coverage	Value of coverage	January	February	March	April	May	June	July	August	Septem-ber	October	Novem-ber	Decem-ber	Average
Croatia	Croatia	0.2	0.1	0.9	1.4	0.9	2.7	1.7	1.3	1.7	1.1	2.1	1.7	1.32

2.2.6 Item non-response rate

Unweighted non-response rate for certain variables is

%

Variable	Coverage	Value of coverage	January	February	March	April	May	June	July	August	Septem-ber	October	Novem-ber	Decem-ber	Average
Non-response rate for all variables	Croatia	Croatia	0.2	0.1	0.9	1.4	0.9	2.7	1.7	1.3	1.7	1.1	2.1	1.7	1.32

2.2.7 Processing errors

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

The indicator for this survey is not applicable.

2.2.9 Editing rate

The indicator for this survey is not computed.

2.2.10 Hit rate

The indicator for this survey is not computed.

2.2.11 Model assumption error

The estimate calculation model is not applied.

2.3 Data revision

2.3.1 Data revision – policy

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

The 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

3.1.1 Time lag – first results

Time lag – first results is T + 29 days.

3.1.2 Time lag – final results

Time lag – final results is T + 29 days.

First results are also final results.

3.2. Punctuality

3.2.1 Punctuality – delivery and publication

Punctuality is 0.

The punctuality of the first and final results is calculated as the difference between the publication date available in the Calendar of Statistical Data Issues and the date of publishing online.

4. Accessibility and clarity

The results of the Monthly Survey on Industrial Production and Persons Employed are published in the following statistical publications: monthly First Releases, Statistics in Line, annual statistical report on industry, Statistical Yearbook of the Republic of Croatia.

Data are also available online on the website of the Croatian Bureau of Statistics and in printed form at the Library of the Croatian Bureau of Statistics for reading or purchase.

4.1 News release

Monthly First Release 2.1.3. Industrial Production Volume Index and Indices of Stocks, Persons Employed and Labour Productivity in Industry

4.2 Other publications

Short-Term Indicators of Industry − Industrial Production, Producer Prices and Turnover of Industry (Statistical Report)
Statistical Yearbook of the Republic of Croatia

4.3 Online database

On the website of the Croatian Bureau of Statistics under the Statistics in Line section (http://www.dzs.hr/Hrv/publication/StatisticsInLine.htm) and in PC Axis database under the Industry section (http://www.dzs.hr/Hrv/DBHomepages/Industrija/Industrija.htm).

4.4 Micro-data access

The conditions under which certain users can access microdata are regulated by the Ordinance on the Conditions and Manner of Using Confidential Statistical Data for Scientific Purposes (NN, Nos 103/03, 75/09 and 59/12).

4.5 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 2.1.3. Industrial Production Volume Index and Indices of Stocks, Persons Employed and Labour Productivity in Industry, and annual report Shot-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, 2009 version – NIPUM 2009. (NN, No 11/09).

5. Comparability

5.1 Asymmetry for mirror flows statistics

Not applicable.

5.2 Comparability over time

5.2.1 Length of comparable time series

Length of comparable time series is 228 months (from 1/1998 to 12/2016).

5.2.2 Reasons for break in time series

Main revisions are planned to be carried out every 5 years in relation to the change of the reference year due to the change of the National Classification of Activities (NKD). Currently, 2010 is applied as the base year with no major needs for revision, and there is no break in time series.

6. Coherence

6.1 Coherence – short-term and structural data

Data in this survey are presented on a monthly basis in relative form (indices), while in other surveys (structural business statistics), they are presented on an annual basis in absolute form (persons employed) and in the annual PRODCOM survey, as absolute data for industrial production.

6.2 Coherence – national accounts

The indicator for this survey is not applicable.

6.3 Coherence – administrative sources

The indicator for this survey is not applicable.

7. Cost and burden

7.1 Cost

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

7.2 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.