# Industrial production

| 1 Contact | |
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| 2 Metadata update | |
|---|---|
| **2.1 Date of last update** | 02.07.2020 |

## 3 Statistical presentation

### 3.1 Data description

Industrial production (IP) is one of the most important business indicators and calculation is based on the change of production volume representatives in reference month compared to the reference year 2015, based on the List PRODSLOV (compatible with European list PRODCOM) and on the two-stage weight system. Trends of industrial production are generalised by gradual aggregation of indices of production of selected representatives. The representatives are the products covering minimum 80 % of production volume. Individual indices of production of these representatives are calculated on the basis of change of volume of their production in monitored period in comparison with basic period, and they are aggregated into individual indices of product groups by their weights. For weight specifying there are used data on value added from yearly of enterprise survey for the year 2015 and data on manufacturing the products in value expression from monthly industrial surveys for year 2015. The values of IPI for approximately 40 % of representatives surveyed in value expression, are calculated on the basis of fixed prices (December 2015 = 100). New price deflator is constructed on the basis of price development of products manufactured in SR for domestic and foreign markets. Data adjusted by working days or seasonal adjusted, are monthly reviewed from the beginning of time series.

The variables surveyed in the monthly questionnaire PRIEM 1-12 are:

- Production of industrial goods and services – value and physical volume of production; industrial goods and services are classified according to the "PRODSLOV" list (Slovak national version of PRODCOM List); VAT and excise duties are excluded;
- Hours worked - actual hours worked on manufacture of products with a long term period of production

### 3.2 Classification system

Štatistická klasifikácia ekonomických činností (SK NACE Rev. 2) - Branch classification of economic activities – NACE rev.2.

Klasifikácia štatistických územných jednotiek- Nomenclature of Territorial Units for Statistics– NUTS 2010.
Štatistická klasifikácia produktov podľa činností - Classification of products by activity - CPA 2015.
PRODSLOV List ( Slovak version of PRODCOM)

### 3.3 Sector coverage

Enterprises with principal activity in Divisions 05 to 39 of SK NACE Rev. 2 and selected enterprises with a non-industrial principal activity.

### 3.4 Statistical concepts and definitions

The industrial production index measures change in the volume of industrial output in the Slovak Republic, based on a selection of enterprises and products. Production of industrial goods and services is measured in value and physical volume of production; industrial goods and services are classified according to the "PRODSLOV" list; VAT and excise duties are excluded.
The PRODSLOV survey is realize monthly on the 10 digits selected products codes in physical units, values and hours worked. Besides of the surveyed production of products, the survey of sub-contraction works are surveyed at the 10 digit level of products codes as well.
The variables collected are:

### 3.5 Statistical unit

Enterprise is the reporting unit as well as observation unit.

### 3.6 Statistical population

Enterprises with principal activity in Divisions 05 to 39 of SK NACE Rev. 2 and selected enterprises with a non-industrial principal activity.
All enterprises with 20 and more employees registered in the business register and enterprises in the business register with less than 20 employees that:
— are statistically important (the decision about including them into survey of big enterprises was done by experts of particular activities, for example responsible for industry data);
— or have a turnover in excess of EUR 5 million.
Number of units addressed: 2 889
In addition about 24 enterprises with less than 20 employees are selected, which are statistically important according to expert judgement.
The non-industrial enterprises are included if their value of production of a particular product is more than 50% of the average output for enterprises classified to the relevant NACE Class to which that product is typically related.
Number of units: 15
The Business register is the frame for identifying units for the population. The Business register is updated in daily frequency from: the business register, the trades register, the professional chambers, and from other ministries. The Business register is updated with information from the tax register, the social insurance company register and from statistical surveys.

### 3.7 Reference area

All regions of the Slovak Republic are covered by the survey. The reporting units are residents at the territory of the Slovak Republic and provide data on their domestic activities and activities outside, if the activities carried out are of a subject of the tax and other duties in relation to Slovak legislation.

### 3.8 Time coverage

Data series starts 2008 with new base year 2015. Indices of gross data, indices adjusted from the influence of the working days and also from the influence of seasonal effect are provided to Eurostat.-

In the Datacube are indices published adjusted from influence of working days.

### 3.9 Base period

The base year 2015=100 is implemented since January 2018 data from the beginning of the year 2018. Indices are calculating in the current prices for selected products and recalcuted with constant prices (December 2015=100).

## 4 Unit of measure

Indices.

## 5 Reference period

Month.

## 6 Institutional mandate

### 6.1 Legal acts and other agreements

Right to collect data in general is governed by the Slovak National Council law No 540/2001(Digest) on the state statistics as amended and supplemented by further regulations.
The obligation to provide data is stated in the Statistical Law and its provisions (Programme of State Statistical Surveys), which is fixed for a 3-year period. Survey Priem 1-12 is part of this Programme of State Statistical Surveys.

### 6.2 Data sharing

From 2003 the required variables are transmitted regularly to Eurostat in GESMES format.
From 2017 the required variables are transmitted to Eurostat in SDMX format.
Data is also used for estimation purposes in national accounts and data is also transmitted to OECD, UN, IMF, National Bank of Slovakia, Ministries, Government institutions, Federations of industrial associations.

## 7 Confidentiality

### 7.1 Confidentiality - policy

Confidentiality of statistical data is laid down in act No. 540/2001 Coll. On state Statistics, as amended, § 30.

Instructions and guidelines are provided in internal directive SME – 1/2015 - Directive on confidentiality data protection complemented by Methodological guideline MET-1/2013. Directive contains general issues related to the confidentiality, while the methodological guideline is focused on concrete methods and parameter values used in the phase of confidentiality treatment of particular statistical surveys results and data files.

### 7.2 Confidentiality - data treatment

We apply the primary and secondary confidentiality data treatment - data cell for less than 3 enterprises is protected.

## 8 Release policy

### 8.1 Release calendar

First Release Calendar_ provides the precise release dates for the coming four months in advance. The calendar is updated monthly. It covers main economic and social indicators established currently within the EU regulations and IMF special standard, which define timeliness standards as well.
In the _First Release Calendar_ compilation release dates defined by Eurostat are taken into consideration.
The _Catalogue of Publications _ is released every year. It contains information on particular publications, periodicity and dates of release.
Industrial production index is one of main economic indicators.

### 8.2 Release calendar access

First Release Calendar_ is publicly accessible. It is disseminated on the office's website.
Users are also informed about the availability of the release calendar in a notice published in the relevant activity's publication.
The data are released simultaneously to all interested parties by issuing _Information Reports which are posted on the website of the Statistical office of the Slovak Republic.

### 8.3 User access

The first release is performed in the form of an information report or a press conference. There is a standing rule, that all users have the right to be provided with information at the same time. Outputs (information reports) are released at the standard daily time (at 9.00 o’clock) at the Internet portal of the SO SR in accordance with Principles of Release and Provision of Statistical Information and available by contract for media hovorca@statistics.sk.

## 9 Frequency of dissemination

Month.

## 10 Accessibility and clarity

### 10.1 News release

Released monthly in electronic publications:
— " _Information reports_ " according to the release calendar;

— „Industry - Selected indicators and Industrial production index“

### 10.2 Publications

"Statistical Yearbook of the Slovak Republic"
" Industry - Selected indicators and Industrial production index "
"Statistical Report on Basic Development Tendencies inthe Economy of the Slovak Republic"

### 10.3 On-line database

Public database
DATACUBE

### 10.4 Micro-data access

Micro-data are not disseminated.

### 10.5 Other

Data are sent to Eurostat, International Monetary Fund, OECD, United Nations, national administration, National Bank of Slovakia and other significant users define their own specific requests.

### 10.6 Documentation on methodology

Metadata for selected indicators are disseminated in ESMS structure. Dissemination of metadata is implemeted.
Metadata of statistical outputs are available independent from publication form in electronic format. Metadata update is performed by persons responsible for the relevant topic following the methodology change.
The update of metadata disseminated in databases as well as of metadata on portal is conducted according to the annual time tables of updating.
Each publication contains an introduction concerning methodological notes and contact for the information service. On the website of the SO SR there is available:
- Information on methodology of IPI presented in SO SR portal in the section Metadata and publication Industry - Selected indicators and Industrial production index
- statistical questionnaires forms in national version including methodological notes;
- methodological sheets (descriptions of statistical indicators in detail) in national version.

### 10.7 Quality documentation

Technical projects of statistical surveys and methodological directives Quality indicators of statistical outputs and processes (MET-2/2012) and Application of mathematical-statistical methods for statistical surveys (MET-3/2012) are available for statistical data production.
At present quality reports are elaborated if required by the European regulations in compliance with ESS Handbook fo Quality Reports (EQHQR).
The quality reports are integrated into the new integrated stat. information system - ISIS and into the updated internal directives on value-adding processes, selfassessments of stat. surveys and methodological audits (in preparation), incl. analysis and reporting of the results are being integrated into the existing QMS system.

## 11 Quality management

### 11.1 Quality assurance

Quality policy is defined and made available to the public in documents.
Quality declaration and Quality policy.The SO SR high level statements highlight customer orientation and quality of the SO SR products and services; this is then reflected in the development strategy of the SO SR for the given period of time in: Vision, mission, common shared values.
Quality Manual is covering all elements of the ISO 9001.
There are defined internal directives related to the value adding processes supported by supporting managerial processes and by supporting resource processes.
European Statistics Code of Practice is the backbone of the whole QMS.

### 11.2 Quality assessment

At present the technical projects are elaborated for each statistical survey including all necessary issues related to data entry, data completeness and statistical controls. This process is organised by specialised regional offices of the Statistical Office of the Slovak Republic. The cross-checking is done in the context of the statistical control process. A comparison with the development in previous periods is done.
The quality reports are integrated into the new integrated stat. information system - ISIS and into the updated internal directives on value-adding processes, selfassessments of stat. surveys and methodological audits (in preparation), incl. analysis and reporting of the results are being integrated into the existing QMS system.
Regarding the results of particular data production processes the overall quality of the indicator industrial production is considered to be as good.

## 12 Relevance

### 12.1 User needs

The information service of the SO SR also provides users with this information on request, free of charge.
Users are consulted:
- in accordance with internal directives on Value adding processes, part Communication with users;
- via Survey on satisfaction of users with products and services of the SO SR, in two-year periodicity;
- via conduct of activities focussing on learning about expectations of key users and on supporting better interpretation and better use of statistical products (action programe defined by the development strategy of the SO SR and reflected in Marketing plan for respective year)); the activities are evaluated in annual Evaluation of Marketing plan; document Overview of activities focussing on learning about expectation of key users and on supporting better interpretation and better use of statistical products
- via meetings with users conducted in accordance with the action programme defined by the development strategy of the SO SR and reflected in the Marketing plan for the respective year: to carry out activities focussing on learning about expectations of key users and on supporting better interpretation and better use of statistical data.

Consultations with users are required by statistical act stressing the cooperation with other organisations (ministries and other state organisations) during preparation of the Programme of State Statistical Surveys.
An advisory body the Statistical Council consists of members representing main users (representatives of ministries, state organisation and public institutions).

The Council is the permanent expert advisory body for the President of the SOSR in the field of state statistics. The task of the Council is to draft /submit proposals and recommendations regarding state statistics concepts, to discuss the Programme of the state statistical surveys and other tasks according to the Status on the Statistical Council.
In practice the consultations with users run on bilateral bases as well as within activities covered by the action programme Activities focussing on learning about expectation of key users and on supporting better interpretation and better use of statistical products.
Key users of particular statistics products are listed in Marketing plan:
International organisations - Eurostat, OECD, United Nations
National institutions - National Bank of Slovakia, Federation of employer's Associations of the Slovak Republic etc.

### 12.2 User satisfaction

User satisfaction is monitored via "Survey on satisfaction of users with products and services of the SO SR" conducted regularly with two-year periodicity. Evaluation of the user satisfaction survey also includes satisfactions rate (overall and for specified areas as well as for groups of products) and it is submitted together with conclusions and suggestions for improvements to top management meeting for approval.

### 12.3 Completeness

Monthly time series are from January 2008.

## 13 Accuracy and reliability

### 13.1 Overall accuracy

Sampling error in the data is negligible. Bias is not measured.

### 13.2 Sampling error

The calculation of ICV is not relevant.

### 13.3 Non-sampling error

Non sampling errors include errors of coverage, measurement, processing and item and non-response. We apply various treatments to ensure that errors are minimised. Improvement actions include daily business registry updates, careful logical and accounting controls and constant contact with the reporting units.
For each survey the Technical project (TP) of data processing is elaborated. One part of TP is dedicated to the description/definitions of checks.
Imputation of the data provide for example for monthly survey from previous 3 months or by selection of the donor.
Response rate is the same at the time data are provided to Eurostat and also at the time data are first published nationally**.**
The response rate (for October 2018):

1. At the time data are provided to Eurostat: 97,75 %
2. At the time data are first published nationally: 97,75 %

Response rate is followed-up by regional statistical Office each day.

## 14 Timeliness and punctuality

### 14.1 Timeliness

Data are released approximately T+43 days after reference month. Requested data by Eurostat are transmited approximately T+43 days. See details in next point 14.2.

### 14.2 Punctuality

All deadlines have been respected.

## 15 Coherence and comparability

### 15.1 Comparability - geographical

Industrial production index data are calculated for all territory of Slovak Republic. The same statistical concepts are applied for the entire area of the Slovak Republic.

### 15.2 Comparability - over time

With the change to the new base year 2015 data series are published and comparable from 2008.

### 15.3 Coherence - cross domain

The following data comparison analysis is done:
1) Comparison of monthly survey results with quarterly data surveyed for the purposes of national accounts (for the calculation of quarterly GDP);
2) Comparison with structural business statistics data;
3) A regular analyisis and consultation of the STS experts with the national accounts experts is organised;
4) The trends of the STS data are compared with the business tendency surveys.
The analysis shows very good compliance level in case of parts of population surveyed exhaustively. Some differences appear when comparing data from monthly, quarterly and yearly samples, which are the subject of further detailed data analysis.

### 15.4 Coherence - internal

There are no problems with internal consistency of aggregates in case of Industrial production index.

## 16 Cost and burden

The cost and burden measurement at the level of European Statistical Products is in competence of the Resources Directors Group within Eurostat.

## 17 Data revision

### 17.1 Data revision - policy

Revisions are in conformity with standards, time-tested and transparent. They are described in decision ROZ-3/2018 Revision Policy of the SO SR.
The same revision policy is applied to STS data released nationally and transmitted to Eurostat.

According to Revision Policy of the SO SR the revised data are accompanied by all necessary explanations (reasons, character, etc.), they are accessible via the SO SR Portal.
The Revision Policy and Calendar of Revisions of the SO SR as well as all necessary explanations are accessible via the SO SR Portal.
The Revision Policy of the SO SR
We distinguish:
**Routine revisions** – regular revisions of data not influenced by change of methodology. In general, the monthly/quarterly data is considered to be preliminary.
Routine revisions of data may be necessary due to data available from quarterly enterprise surveys, new data received from reporting units, correction of price indices or corrected data from reporting units. The revised data for the last 3 months of the quarter are published together with the preliminary results of the following month/quarter. The publication of the revised data is done periodically in line with Calendar of revisions
**Extra-ordinary revisions** – not scheduled in the Calendar of revisions. Extra-ordinary revisions include revisions of definitive data due to changes of methodology, changes of classifications, change of base year, changes of mathematical/statistical methods of data calculation. Those revisions may result in a break in time series of data. The users are informed via Press releases in advance.
At present, numeric information on the size of revisions of data is not available.
The policy on vintage database is laid down in the Revision Policy of SO SR. Practical implementation of the policy is being prepared in the statistical information system.
Vintage database of raw data exists in source database and is not publicly accessible. Data and documents regarding the revision is kept. General information about revision and methodological explanation is published, if relevant.
Coherence of the revision policy is respected for the data released nationally and disseminated to Eurostat.

### 17.2 Data revision - practice

The primary source of routine revisions is the need of data revisions due to data available from quarterly enterprise surveys, new data received from reporting units or corrected data from reporting units. The revised data for the last 3 months of the quarter are published together with the preliminary results of the following month. The publication of the revised data is done periodically in line with Calendar of revisions.

## 18 Statistical processing

### 18.1 Source data

Enterprises with principal activity in Divisions 05 to 39 of SK NACE Rev. 2 and selected enterprises with a non-industrial principal activity.
All enterprises with 20 and more employees registered in the business register and enterprises in the business register with less than 20 employees that:
— are statistically important (the decision about including them into survey of big enterprises was done by experts of particular activities, for example responsible for industry data);
— or have a turnover in excess of EUR 5 million.
Number of units addressed: 2 889
In addition about 24 enterprises with less than 20 employees are selected, which are statistically important according to expert judgement.
The non-industrial enterprises are included if their value of production of a particular product is more than 50% of the average output for enterprises classified to the relevant NACE Class to which that product is typically related.

Number of units: 15

**Trade register**

Estimates for sole proprietors performing their business activity on the base of issued trade licences according to Act no. 455/1991 [Digest] (the data source is the number of issued trade licences).

## 18.2 Frequency of data collection

Monthly.

## 18.3 Data collection

Data collection is organized by specialised regional office of the SO SR in Banska Bystrica.

The electronic data collection of monthly data is compulsory since the 1st January 2016 in line with the obligation laid down in the Slovak National Council law No 326/2014 (Digest) amending the Slovak National Council law No 540/2001 on the state statistics.

Formal and logical checks are realised in the process of data entry automatically; (compatible with Validation level 0 and 1), informal checks aim of which is to control the complexity and relations among the variables ((compatible with Validation level from 2 to 5). Most of the errors are directly consulted with the reporting units by our regional offices.

Data should be submitted on the 17th calendar day following the end of the reference month. The non-responding units are informed about their reporting duty and contacted by regional offices again. There are no problems with reporting discipline in the case of big enterprises, nevertheless the situation in this area shows the decreased tendency in the last years.

The basic step in the process of unit non-response calculation is the analysis of population with regard to the status of activity of reporting units. For this purpose we use the classification of special response and non-response cases. The particular codes describing active and non-active units are allocated to every reporting unit. Afterwards we define eligible units: they are all active responding and non-responding units. In some cases it is not possible to obtain any information about the unit. In this case we suppose there is the same share of active and non-active units as in the known population. The part corresponding to active units we consider to be non-responding units.

Response rates for one surveyed period are stated in 13.3 for October 2018.

## 18.4 Data validation

The data entry, data completeness and statistical control are organised by specialised regional offices of the SO SR.

It has been distinguished between two levels of checking:

- 1/ **Formal checks**, which are realised in the process of data entry automatically; (compatible with Validation level 0 and 1)
- 2/ **Informal checks** aim of which is to control the complexity and relations among the variables ((compatible with Validation level from 2 to 5)

According to the **importance** there are classified 2 basic types of informal checks:

- **I – Informative check** - this check gives the additional information, which is important for the following process of corrections. It informs also about some inconsistencies in the state of fulfilment of the questionnaire, about item non-response, exceeding stated limits etc.
- **Z – Check of great importance** - it is mostly check indicating the exact error and it must be always corrected or explained.

Most of the errors are directly consulted with the reporting units by our regional offices.

## 18.5 Data compilation

Non-response is treated by the imputation of data from the previous month's survey, up to a maximum of three months or finding of the donor.
The IPI's calculation is based on the change in the volume of selected representatives and on the two-stage weighting system. The representatives are the products surveyed at the 10-digit level of PRODSLOV codes. Mostly production in physical units is collected. The share of production in value is approximately 40% of surveyed data. In two cases hours worked are surveyed (NACE Classes: 30.11 – Building of ships and floating structures; 30.40 – Manufacture of military fighting vehicles). In addition sub-contraction works are surveyed at the 10-digit level of products codes as well.
Individual indices of production of these 6 digit representatives are calculated on the basis of change of volume of their production in monitored period in comparison with basic period, and they are aggregated into individual indices of product aggregated groups by their weights. The weights are computed on the base of value added data from the annual enterprise survey for 2015 and on the production value data of individual products from the annually PRODSLOV survey for 2015.
In the case of products expressed in value an appropriate price index is used to deflate them. New price deflator is constructed on the basis of price development of products manufactured in SR for domestic and foreign markets.
Data adjusted by working days, or seasonal adjusted, are monthly reviewed from the beginning of time series.
A composite individual index of Laspeyres type is being compiled.

### 18.6 Adjustment

Working day adjustment and seasonal adjustment procedures are carried out using JDEMETRA+ and TRAMO-SEATS.

## 19 Comment