

**PRESS RELEASE**

No. 17 of January 14, 2015

**Industrial production indices  
in November and during the period 1.I-30.XI.2014**

For an accurate interpretation of the results, please see the methodological explanations on pages 5 and 6 of the press release.

**During the period 1.I-30.XI.2014, industrial production increased compared to the period 1.I-30.XI.2013, both as gross series and as series adjusted by number of working days and seasonality, by 6.3% and 7.5%, respectively.**

**Industrial production fell by 6.2% as gross series in November 2014 compared to the previous month and was down 0.8% as series adjusted by number of working days and seasonality.**

**Industrial production increased compared to the same month of the previous year, both as gross series and as series adjusted by number of working days and seasonality, by 0.2% and 2.8%, respectively.**

**Industrial production indices by CANE Rev. 2 sections**

2010=100

Activity		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct. <sup>*)</sup>	Nov. <sup>*)</sup>
		2013		2014										
Total industry	G	131.6	111.2	118.3	122.0	130.4	125.1	129.4	128.1	131.5	105.0	133.8	140.6	131.9
	S	123.5	122.7	126.6	125.6	127.1	125.8	129.2	128.2	127.5	124.1	127.5	128.0	127.0
Mining and quarrying	G	119.4	120.7	107.2	107.6	117.9	113.4	123.7	107.5	122.3	122.1	116.6	126.7	116.3
	S	114.0	116.0	108.8	118.0	117.6	117.6	124.1	112.2	121.8	120.8	115.0	122.5	113.6
Manufacturing	G	134.3	109.1	118.3	123.8	133.8	130.1	134.8	134.5	136.9	105.9	140.1	146.3	135.7
	S	126.0	124.7	129.9	128.5	130.7	129.9	133.4	133.0	131.4	127.0	131.6	131.7	130.8
Electricity	G	113.9	124.7	121.9	113.1	107.7	89.1	88.0	83.8	91.3	91.6	89.8	100.0	106.3
	S	107.0	109.5	106.9	105.0	101.4	95.9	97.8	95.4	98.5	101.8	99.1	100.3	100.8

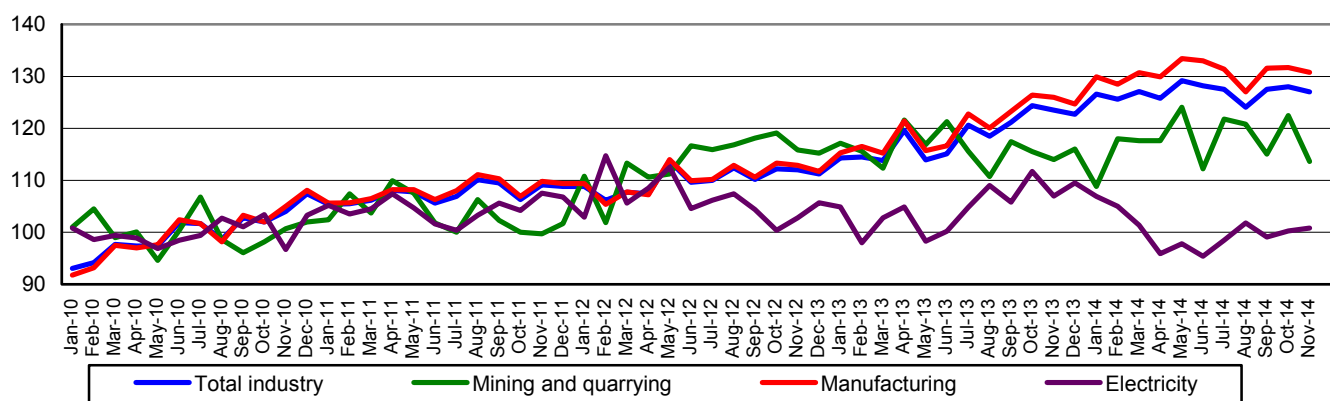
Note: \*) Provisional data; \*) Rectified data; G = gross series; S = series adjusted by number of working days and seasonality; see the methodological explanations

**Monthly evolution of industrial production by CANE Rev. 2 sections**

**- January 2010 – November 2014 -**

(series adjusted by number of working days and seasonality)

2010=100



## Industrial production indices by main industrial groupings

2010=100

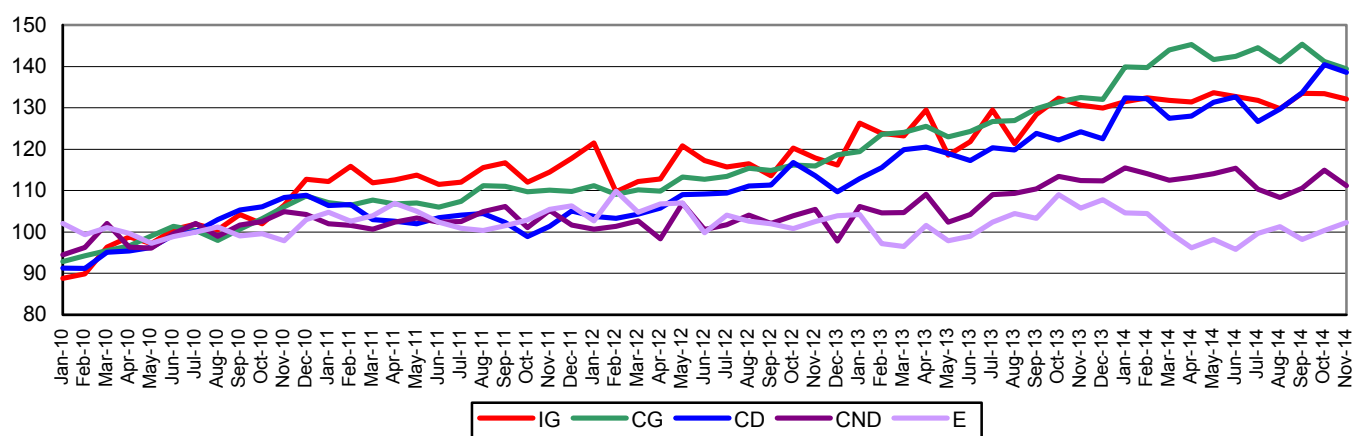
Symbol		Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct. <sup>*)</sup>	Nov. <sup>*)</sup>
		2013			2014									
IG	G	135.4	105.5	117.4	123.8	137.1	131.7	137.2	134.5	140.3	120.6	141.0	145.8	134.1
	S	130.6	129.9	131.5	132.4	131.8	131.4	133.6	132.7	131.8	129.8	133.5	133.4	132.1
CG	G	143.1	116.6	128.2	136.0	147.9	142.8	146.3	148.6	151.2	100.8	155.4	159.6	148.1
	S	132.5	132.0	139.9	139.7	144.0	145.3	141.7	142.4	144.5	141.1	145.4	141.2	139.4
CD	G	136.6	98.6	118.3	130.3	129.7	128.0	131.8	129.7	123.8	118.3	143.0	158.0	146.7
	S	124.2	122.5	132.4	132.2	127.5	128.0	131.3	132.6	126.7	129.7	133.6	140.4	138.6
CND	G	121.3	105.8	104.0	104.0	110.4	110.8	117.0	115.0	115.0	99.0	115.2	125.7	116.7
	S	112.4	112.3	115.5	114.1	112.5	113.2	114.1	115.4	110.3	108.3	110.6	115.0	111.2
E	G	110.2	118.5	115.6	107.8	105.4	90.4	92.1	85.4	94.9	94.7	93.1	101.3	105.2
	S	105.8	107.8	104.6	104.5	99.9	96.2	98.2	95.8	99.7	101.3	98.2	100.4	102.3

Intermediate goods (IG); Capital goods (CG); Consumer durables (CD); Consumer non-durables (CND); Energy (E)

Note: \*) Provisional data; \*) Rectified data; G = gross series; S = series adjusted by number of working days and seasonality; see the methodological explanations

### Monthly evolution of industrial production by main industrial groupings - January 2010 – November 2014 - (series adjusted by number of working days and seasonality)

2010=100



### November 2014 compared to October 2014

In November 2014, industrial production (the gross series) decreased by 6.2% compared to the previous month due to falls in mining and quarrying (-8.2%) and manufacturing (-7.2%). The electricity, gas, steam and air conditioning supply was up 6.2%.

By main industrial groupings, decreases were recorded for intermediate goods (-8.1%), consumer non-durables and capital goods (-7.2% each), and consumer durables (-7.1%). The energy sector rose by 3.9%.

Industrial production (the series adjusted by number of working days and seasonality) decreased by 0.8% due to falls in mining and quarrying (-7.3%) and manufacturing (-0.7%). The electricity, gas, steam and air conditioning supply was up 0.5%.

By main industrial groupings, decreases were recorded for most categories of goods: consumer non-durables (-3.3%), consumer durables (-1.3%), capital goods (-1.2%) and intermediate goods (-1.0%). The energy sector rose by 1.8%.

## *November 2014 compared to November 2013*

**In November 2014, industrial production (the gross series)** was up 0.2% from the same month of the previous year due to a rise in manufacturing (+1.1%). The electricity, gas, steam and air conditioning supply was down 6.7%, and mining and quarrying dropped 2.6%.

By main industrial groupings, increases were recorded for consumer durables (+7.5%) and capital goods (+3.5%), while decreases were reported for energy (-4.5%), consumer non-durables (-3.8%) and intermediate goods (-1.0%).

Industrial production (**the series adjusted by number of working days and seasonality**) increased by 2.8% due to a rise in manufacturing (+3.8%). The electricity, gas, steam and air conditioning supply was down 5.8%, and mining and quarrying dropped 0.4%.

By main industrial groupings, increases were recorded for consumer durables (+11.6%), capital goods (+5.2%) and intermediate goods (+1.1%). Decreases were reported for energy (-3.3%) and consumer non-durables (-1.1%).

## *The period 1.I-30.XI.2014 compared to the period 1.I-30.XI.2013*

**During the period 1.I-30.XI.2014, industrial production (the gross series)** increased by 6.3% compared to the period 1.I-30.XI.2013 due to rises in manufacturing (+7.7%) and mining and quarrying (+0.7%). The electricity, gas, steam and air conditioning supply was down 4.5%.

By main industrial groupings, increases were recorded for most categories of goods: capital goods (+11.8%), consumer durables (+8.8%), intermediate goods (+3.8%) and consumer non-durables (+3.4%). The energy sector dropped 2.3%.

During the period 1.I-30.XI.2014, industrial production (**the series adjusted by number of working days and seasonality**) was up 7.5% from the period 1.I-30.XI.2013 due to rises in manufacturing (+9.0%) and mining and quarrying (+1.1%). The electricity, gas, steam and air conditioning supply was down 3.9%.

By main industrial groupings, increases were recorded for capital goods (+12.8%), consumer durables (+10.4%), intermediate goods (+4.9%) and consumer non-durables (+4.6%). The energy sector dropped 1.8%.

# Industrial production indices

percentages

		NOVEMBER 2014 compared to:		1.I-30.XI.2014/ 1.I-30.XI.2013
		OCTOBER 2014	NOVEMBER 2013	
Industry – total	G	93.8	100.2	106.3
	S	99.2	102.8	107.5
<b>- by sections:</b>				
<b>Mining and quarrying</b>	G	91.8	97.4	100.7
	S	92.7	99.6	101.1
• Mining of coal and lignite	G	107.9	102.1	94.8
	S	112.2	102.3	95.1
• Extraction of crude petroleum and natural gas	G	96.1	98.6	99.3
	S	99.3	99.6	99.4
• Mining of metal ores	G	96.9	156.0	106.3
	S	126.5	202.9	103.4
• Other mining and quarrying	G	106.0	80.2	92.5
	S	102.5	88.4	99.5
• Mining support service activities	G	80.6	98.1	105.9
	S	79.1	100.3	105.4
<b>Manufacturing</b>	G	92.8	101.1	107.7
	S	99.3	103.8	109.0
• Manufacture of food products	G	93.8	96.6	104.1
	S	97.2	99.9	106.4
• Manufacture of beverages	G	82.5	98.4	97.3
	S	92.4	102.1	98.9
• Manufacture of tobacco products	G	94.3	112.8	117.3
	S	99.8	123.6	124.6
• Manufacture of textiles	G	98.7	93.4	103.0
	S	100.4	96.9	105.0
• Manufacture of wearing apparel	G	94.0	94.1	100.6
	S	98.0	98.0	102.0
• Tanning and dressing of leather; manufacture of luggage, handbags, saddlery, harness and footwear; dressing and dyeing of furs	G	92.2	94.6	105.8
	S	95.5	99.7	107.1
• Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	G	92.5	96.8	96.8
	S	100.7	98.6	98.0
• Manufacture of paper and paper products	G	96.9	122.4	127.2
	S	103.6	127.1	128.9
• Printing and reproduction of recorded media	G	92.1	101.2	111.3
	S	94.0	104.8	111.9
• Manufacture of coke and refined petroleum products	G	98.8	107.4	115.0
	S	102.6	106.4	114.5
• Manufacture of chemicals and chemical products	G	85.4	96.2	102.6
	S	97.9	100.0	103.4
• Manufacture of basic pharmaceutical products and pharmaceutical preparations	G	91.1	98.0	98.7
	S	96.5	98.6	102.3
• Manufacture of rubber and plastic products	G	90.1	102.5	106.4
	S	100.1	104.4	107.2
• Manufacture of other non-metallic mineral products	G	94.2	101.5	104.0
	S	107.1	104.9	104.0
• Manufacture of basic metals	G	90.5	106.6	104.1
	S	97.9	109.7	105.4
• Manufacture of fabricated metal products, except machinery and equipment	G	87.2	89.7	101.6
	S	96.4	92.2	103.5
• Manufacture of computer, electronic and optical products	G	96.0	128.7	155.4
	S	104.2	135.2	156.5
• Manufacture of electrical equipment	G	92.8	108.1	113.5
	S	99.6	111.5	115.9
• Manufacture of machinery and equipment n.e.c.	G	95.7	95.3	105.5
	S	97.3	97.6	106.3

		NOVEMBER 2014 compared to:		1.I-30.XI.2014/ 1.I-30.XI.2013
		OCTOBER 2014	NOVEMBER 2013	
• Manufacture of motor vehicles, trailers and semi-trailers	G	92.5	103.5	103.3
	S	100.2	102.9	103.1
• Manufacture of other transport equipment	G	93.8	98.4	121.8
	S	99.3	105.9	124.6
• Manufacture of furniture	G	93.2	92.0	103.3
	S	98.6	96.7	105.0
• Other manufacturing	G	94.3	128.2	113.9
	S	101.2	133.1	115.7
• Repair and installation of machinery and equipment	G	88.0	78.6	98.2
	S	96.9	89.8	103.9
<b>Electricity, gas, steam and air conditioning supply</b>	<b>G</b>	<b>106.2</b>	<b>93.3</b>	<b>95.5</b>
	<b>S</b>	<b>100.5</b>	<b>94.2</b>	<b>96.1</b>
• Electricity, gas, steam and air conditioning supply	G	106.2	93.3	95.5
	S	100.5	94.2	96.1
<b>- by main industrial groupings:</b>				
• Intermediate goods	G	91.9	99.0	103.8
	S	99.0	101.1	104.9
• Capital goods	G	92.8	103.5	111.8
	S	98.8	105.2	112.8
• Consumer durables	G	92.9	107.5	108.8
	S	98.7	111.6	110.4
• Consumer non-durables	G	92.8	96.2	103.4
	S	96.7	98.9	104.6
• Energy	G	103.9	95.5	97.7
	S	101.8	96.7	98.2

Note: G = gross series; S = series adjusted by number of working days and seasonality

## METHODOLOGICAL EXPLANATIONS

1. The **data source** is the PROD (Industrial products and services) chapter of the monthly statistical survey on short-term indicators in industry (IND TS), in accordance with Council Regulation (EC) No 1165/1998, Regulation (EC) No 1158/2005 of the European Parliament and of the Council, and Commission Regulation (EC) No 1503/2006 concerning short-term statistics.

2. The **statistical survey is a sample survey**. The stratified sampling with simple random selection without replacement within each stratum, where the stratification variables are the economic activity and the size class of the enterprise according to the number of employees, is used as type of sampling and as procedure for drawing the sample. Due to the need for comparability of results by groups of homogenous activities as well as at enterprise level from one period to another, the category of economic operators with a high economic potential (50 or more employees) is surveyed exhaustively. The sampling frame ensures a degree of representativeness (calculated according to turnover) of 93.44% of the total number of active units. The data are collected from approximately 9900 economic operators that have industry as their main activity. The maximum accepted estimation error is  $\pm 3\%$ .

## 3. Concepts and definitions

The industrial production index is known as an output index or a production volume index which aims to identify the changes in the production volume. Industrial production indices measure the evolution of production overall, by CANE Rev. 2 sections (mining and quarrying, manufacturing and electricity, gas, steam and air conditioning supply) and divisions (divisions 05÷35, excluding group 353) as well as by main industrial groupings. The degree of coverage for industry overall is 89.8%.

**The nomenclatures used in the calculation of the industrial production index are:**

- *Classification of the Activities of the National Economy (CANE Rev. 2)*
- *Classification of Products and Services related to Activities (CPSA 2008)*
- *Main industrial groupings* (intermediate goods, capital goods, consumer durables, consumer non-durables, energy), which represent an aggregate of CANE Rev. 2 divisions or groups used in European statistics to characterise industry according to the purpose of the goods produced

Intermediate goods include the following CANE Rev. 2 divisions and groups, respectively: 07, 08, 09, 106, 109, 131, 132, 133, 16, 17, 201, 202, 203, 205, 206, 22, 23, 24, 255, 256, 257, 259, 261, 268, 271, 272, 273, 274, 279.

Capital goods include the following CANE Rev. 2 divisions and groups, respectively: 251, 252, 253, 254, 262, 263, 265, 266, 28, 29, 301, 302, 303, 304, 325, 33.

Consumer durables include the following CANE Rev. 2 divisions and groups, respectively: 264, 267, 275, 309, 31, 321, 322.

Consumer non-durables include the following CANE Rev. 2 divisions and groups, respectively: 101, 102, 103, 104, 105, 107, 108, 11, 12, 139, 14, 15, 18, 204, 21, 323, 324, 329.

Energy includes the following CANE Rev. 2 divisions and groups, respectively: 05, 06, 19, 351, 352.

- *PRODROM (Industrial products and services list)* – used in the collection of data on industrial production; it is fully harmonised with the nomenclature used in EU countries, namely the PRODCOM list. The positions within the PRODROM result from the breakdown of the elementary subclasses of CPSA 2008. All PRODROM positions are at the same level, the potential groups requested for analysis and dissemination purposes being obtained by means of processing, on the basis of the structuring criteria used to define each position.

The industrial products list (PRODROM) includes 3389 products and characterises the industrial activities from CANE Rev. 2 sections B, C and D.

The CPSA elementary subclass level is the first level in the calculation of the IPI. The 3389 PRODROM products are aggregated into 1159 CPSA elementary subclasses, of which 777 are taken into account for the calculation of the IPI.

- *Nomenclature of economic operators* – it monthly provides data on physical industrial production; it includes a representative sample of enterprises that have industry as their main activity (CANE Rev. 2: 05÷35) and is made up of all enterprises with 50 or more employees and of a sample of enterprises whose number of employees ranges from 4 to 49, so as to ensure a degree of representativeness of approximately 90% for industry overall and at least 80% at the level of CANE Rev. 2 divisions, representativeness calculated on the basis of turnover.

For a better representation of food industry, due to the specific nature of this sector, the sample of industrial enterprises also includes the trading companies which have agriculture as their main activity, but which have subunits specialised in making agro-food products.

#### 4. Calculation algorithm

The aggregation of the first indices of industrial production is done through a system of successive weightings, using, for the aggregation at the level of CPSA elementary subclasses (higher aggregation level of PRODROM), the unit average price of the base year (2010) and, for the higher aggregation levels (CANE Rev. 2 class, group, division, section, or main industrial grouping), as a weighting element, the base-year (2010) gross value added at factor cost (GVAFC), according to the results of the Structural Business Survey of the base year (2010). The first aggregation level is the CANE Rev. 2 class level, the next aggregation levels being determined as an arithmetic mean of the indices of CANE Rev. 2 classes, groups, divisions, sections, of main industrial groupings, weighted by the corresponding GVAFC of the base year (2010). The indices for the main industrial groupings are obtained by aggregating the indices at the level of CANE Rev. 2 component groups, weighted by the corresponding GVAFC. The industrial production indices for industry overall are obtained by aggregating the indices calculated at the level of CANE Rev. 2 divisions.

5. Beside the gross indices of industrial production, **indices that are adjusted by number of working days and seasonality** are also calculated on a monthly basis, through the **regressive method**, a method recommended by the European regulations concerning short-term indicators (Council Regulation No 1165/1998).

In order to adjust the series, the DEMETRA software package (the TRAMO/SEATS method) was used, which estimates the effect of the number of working days, which differs from one month to another, and the calendar effect (leap years and other national holidays), identifies and corrects the outliers (occasional, transitory or permanent changes in level) and interpolates the missing values.

The series adjusted by number of working days was obtained by removing these effects from the gross series, by means of correction coefficients determined depending on the regression model used (additive or multiplicative).

The setting of the regression models to be used for each series takes place at the beginning of each year and involves the recalculation of the adjusted series that were calculated the previous year (recalculation due to changes in the models adopted, in the number of regressors used and in the number of available observations).

Starting with January 2014, the adjustment of the aggregated levels has been made through the **indirect method**, namely by applying the direct method of adjustment to the lower levels (CANE Rev. 2 divisions). The indices adjusted at section and total industry level were calculated based on the adjusted components, weighted by the GVAFC of the base year. The series adjusted according to the new method was recalculated for the January 2005-December 2013 period and is available in the TEMPO online database.

6. **The data are provisional and can be revised periodically** on the basis of rectifications performed retroactively by the economic operators included in the sample.

*For more information, see the Monthly Statistical Bulletin and the Industry Statistical Bulletin (date of issue January 22, 2015).*

*Comparative data at EU level can be obtained from the Eurostat press release which comes out on Wednesday, January 14, 2015 and which can be accessed at the following address:*

<http://epp.eurostat.ec.europa.eu/portal/page/portal/eurostat/home/>.

The **next press release** will be issued on Thursday, February 12, 2015.