



REPUBLIC OF RWANDA



MARCH 2023 INDEX OF INDUSTRIAL PRODUCTION (IIP)

This is the monthly Index of Industrial Production (IIP). Series has been developed by the National Institute of Statistics of Rwanda (NISR) to provide more timely estimates of the broad trends of industrial output.

March 2023

Index of
Industrial
Production
(IIP)

May 2023

NATIONAL INSTITUTE OF STATISTICS OF RWANDA

Monthly Index of Industrial Production– Formal Activity–March 2023

1. Introduction

This is the monthly Index of Industrial Production (IIP). The IIP, one of the core sets of economic indicators, enables to monitor the industrial production trend in Rwanda during a month compared to corresponding month of the last year. The IIP series has been developed by the National Institute of Statistics of Rwanda (NISR) to provide more timely estimates of the broad trends of industrial output. The series starting from January 2011 appears in excel format on the NISR's website alongside with this report. Highlights of IIP for March 2023 are given below.

The present report attempts to highlight the concept used and the methodology involved in compilation of IIP (see notes below) and exhibits the results during the period of January 2021 to March 2023 with the 2017 base. The results refer to the general index as well as to the sectorial indices (Manufacturing, Mining, Electricity, and Water and waste management). The scope of the IIP as recommended by the United Nations Statistical Office (UNSO) includes mining and quarrying, manufacturing, construction, electricity, gas and water production and supply. But due to constraints of data availability, the IIP compiled in Rwanda has excluded construction activities.

The IIP is being used to measure economic performance of the industries. It is a composite indicator that measures the short-term changes in the volume of production in a given period with respect to a chosen base period. The index can be a tool to compare the performance and growth of state in the industrial sector.

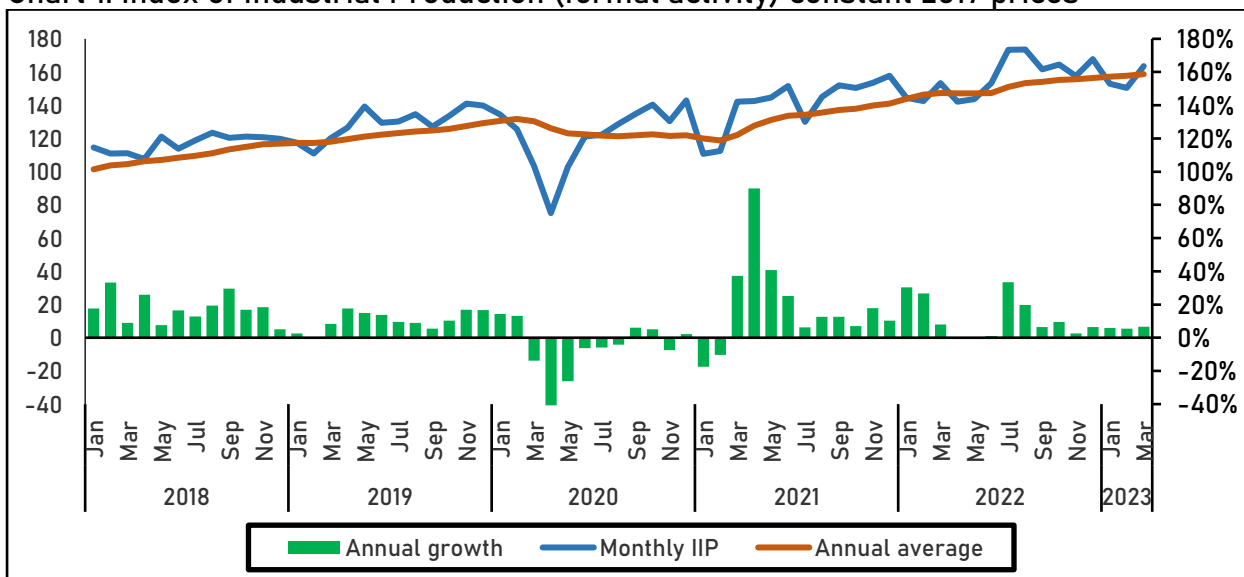
2. Highlights of IIP/ Summary

In March 2023, the Index of Industrial Production (IIP) shows that, industrial output (formal sector) increased by 6.7 percent compared to March 2022, against an increase of 7.7 percent on annual average basis.

Activities performed as follows:

- Mining and quarrying increased by 114.8 percent
- Manufacturing increased by 4.4 percent
- Electricity increased by 11.8 percent; and
- Water and waste management increased by 2.9 percent

Chart 1: Index of Industrial Production (formal activity) constant 2017 prices



Source: NISR/ Index of Industrial Production

3. Details

All activities have contributed positively to the overall index.

The manufacturing activity has registered positive change in its overall index. The positive change in manufacturing activity is mainly due to 46.3 percent increase in wood, paper and printing and 19.0 percent increase in metal products, machinery and equipment. However, the positive change in manufacturing is tempered by a decrease of 14.7 percent in manufacturing of food.

Table 1: Growth of sectors and their contributions to annual change

Activity	Weights	% Changes in March 2023			Contributions to annual change
		On Feb 2023	On Mar 2022	Annual average	
Mining and quarrying	13.0%	2.0%	114.8%	33.1%	3.0
Manufacturing of:					
<i>food processing</i>	23.9%	8.0%	-14.7%	3.9%	-3.6
<i>beverages and tobacco</i>	17.0%	12.7%	2.7%	2.5%	0.5
<i>textiles, clothing & leather goods</i>	4.5%	-0.2%	8.2%	1.8%	0.9
<i>wood, paper; and printing</i>	2.6%	14.7%	46.3%	27.5%	1.7
<i>chemicals, rubber, & plastic products</i>	5.7%	32.9%	0.4%	9.4%	0.0
<i>non-metallic mineral products</i>	5.1%	-2.7%	15.5%	3.7%	0.7
<i>metal products, machinery & equipment</i>	4.5%	-2.3%	19.0%	9.0%	1.0
<i>furniture and other manufacturing</i>	3.4%	9.6%	6.5%	3.6%	0.2
Electricity	18.9%	11.7%	11.8%	11.4%	2.2
Water & waste management	1.4%	7.1%	2.9%	8.8%	0.0
General Index	100%	8.8%	6.7%	7.7%	6.7

Source: NISR/ Index of Industrial Production

Annexes

Table 2: General Index of Industrial Production

Month	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Jan	70.7	74.8	79.6	97.5	114.5	117.4	134.3	110.8	144.4	152.9
Feb	68.1	72.4	79.7	83.3	110.9	110.8	125.5	112.5	142.5	150.4
Mar	71.3	75.9	88.0	102.0	111.0	120.2	103.5	142.2	153.4	163.6
Apr	66.5	73.1	74.0	85.4	107.6	126.6	75.0	142.5	142.1	
May	73.4	76.0	86.2	112.7	121.2	139.3	102.8	144.6	143.7	
Jun	70.8	82.8	97.2	97.7	113.8	129.4	121.2	151.6	153.3	
Jul	96.3	87.8	103.0	105.4	118.8	130.1	122.4	130.0	173.3	
Aug	104.5	90.3	104.7	103.5	123.5	134.6	128.8	145.0	173.6	
Sep	74.5	87.6	91.3	92.9	120.4	127.1	134.9	151.9	161.6	
Oct	79.1	90.5	80.0	103.7	121.2	133.8	140.5	150.3	164.5	
Nov	74.3	79.8	89.1	102.0	120.7	141.0	130.3	153.6	157.7	
Dec	80.9	91.8	95.7	114.0	119.8	139.8	142.9	157.7	167.8	

Source: NISR/ Index of Industrial Production

Table 3: Index of Mining and quarrying

Month	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Jan	68.5	66.5	69.9	95.4	84.9	70.4	141.9	42.6	44.4	50.2
Feb	66.5	65.4	70.7	75.0	80.7	63.1	125.3	38.6	38.6	64.8
Mar	69.1	65.2	75.8	113.8	68.5	53.9	64.0	43.6	30.8	66.1
Apr	60.9	64.1	60.8	70.9	68.8	82.0	33.2	56.4	27.8	
May	66.6	62.9	72.9	140.0	80.0	103.0	28.1	47.2	67.8	
Jun	65.6	70.3	92.6	80.8	60.3	52.2	70.2	91.1	73.7	
Jul	120.1	80.5	105.1	119.0	54.4	65.2	53.3	19.7	93.9	
Aug	133.7	85.5	102.7	109.0	59.3	81.4	41.7	67.3	90.9	
Sep	67.4	80.8	85.9	88.1	67.2	98.2	49.8	103.9	49.3	
Oct	74.5	90.4	65.2	120.4	60.8	121.7	46.3	69.8	86.2	
Nov	72.9	71.8	88.8	99.4	63.2	179.7	49.9	44.7	94.4	
Dec	66.7	83.1	88.4	88.4	70.8	131.9	35.7	44.8	116.7	

Source: NISR/ Index of Industrial Production

Table 4: Index of Manufacturing

Month	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Jan	69.1	78.1	84.1	97.3	122.5	128.9	138.8	113.5	155.2	159.0
Feb	70.1	79.0	86.8	85.8	118.3	122.0	125.7	121.6	168.5	171.4
Mar	71.4	85.6	97.1	99.2	122.9	132.5	112.7	161.2	176.4	184.2
Apr	68.5	80.1	79.5	86.3	113.6	134.0	75.7	153.3	163.6	
May	77.7	82.9	94.2	104.5	128.2	146.1	124.7	151.1	140.1	
Jun	72.9	95.9	104.9	105.8	133.4	160.2	146.9	155.3	162.7	
Jul	79.1	95.7	103.3	100.2	134.0	141.3	152.7	140.0	196.4	
Aug	84.9	98.0	108.9	101.9	141.1	148.1	153.1	163.6	201.9	
Sep	83.1	97.0	98.0	94.5	129.2	139.6	169.6	163.3	186.5	
Oct	86.0	92.6	88.5	100.6	133.2	143.7	172.6	160.5	184.1	
Nov	70.6	86.1	88.8	103.1	134.7	142.2	141.7	172.7	171.0	
Dec	93.8	101.8	100.1	120.9	133.9	142.8	160.0	178.8	176.0	

Source: NISR/ Index of Industrial Production

Table 5: Index of Electricity

Month	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Jan	75.5	80.7	92.2	94.7	105.4	115.2	118.9	126.9	143.4	164.8
Feb	66.5	73.3	84.3	88.2	99.4	106.6	116.2	116.3	135.6	155.0
Mar	73.8	77.9	93.2	100.1	109.4	116.3	118.2	133.8	154.9	173.1
Apr	74.0	79.9	91.1	96.1	100.5	114.1	98.2	132.5	149.6	
May	76.7	90.5	96.1	102.3	112.1	121.6	114.7	136.0	153.1	
Jun	75.2	76.2	90.7	97.0	110.2	115.4	115.6	140.6	149.9	
Jul	75.6	83.4	91.0	102.7	115.3	122.4	124.3	139.3	153.4	
Aug	76.1	81.6	96.2	105.4	116.0	123.1	126.1	139.4	160.5	
Sep	73.7	79.3	90.7	101.7	111.8	119.9	123.1	142.0	156.6	
Oct	79.1	86.6	95.8	105.8	116.5	121.4	129.0	149.2	161.9	
Nov	81.1	85.0	93.8	101.6	109.8	116.6	127.4	138.2	156.1	
Dec	78.6	83.9	97.0	104.4	111.7	120.5	130.5	141.5	152.3	

Source: NISR/ Index of Industrial Production

Table 6: Index of Water and Waste Management

Month	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Jan	90.8	93.2	90.5	99.9	103.7	109.9	111.9	123.5	149.2	160.1
Feb	78.9	82.1	85.8	89.2	91.1	100.8	101.6	110.3	131.9	143.5
Mar	89.1	89.1	98.7	96.8	99.4	108.8	108.0	120.1	149.5	153.7
Apr	86.5	84.6	94.1	95.6	93.4	104.9	100.9	124.3	143.5	
May	90.1	88.3	97.3	101.5	100.8	110.0	107.2	127.8	146.4	
Jun	90.7	87.3	99.5	105.1	103.5	109.5	114.4	142.7	150.1	
Jul	93.1	90.1	104.4	107.2	113.2	118.4	124.5	155.4	161.5	
Aug	89.8	89.0	105.1	105.5	111.3	117.9	125.6	136.6	156.7	
Sep	86.9	85.6	98.0	99.9	108.8	106.2	119.2	124.4	149.3	
Oct	86.9	87.3	100.2	96.5	109.8	110.4	118.6	130.8	155.2	
Nov	86.9	87.1	94.5	99.2	106.6	105.6	114.5	148.5	147.0	
Dec	86.9	87.2	100.6	103.7	110.5	105.2	123.9	150.4	151.1	

Source: NISR/ Index of Industrial Production

Conceptual note on IIP compilation methodology in Rwanda

The Index of Industrial Production (IIP) is a statistical instrument used to monitor the monthly trends in output of industrial activities in Rwanda. It is developed based on a range of short term (monthly) indicators of economic activity.

The IIP series were developed since 2017 and the first publication was done in June 2019. In this publication a series from January 2011 have been compiled and availed to the public. Moreover, figures in this publication are the results of the 2017 rebasing exercise explained below in this note.

The IIP in this statistical release relates to the activity of businesses in the formal sector in Rwanda, defined as those registered with the tax authorities. The IIP series is entirely consistent with the quarterly estimates of Gross Value Added published by NISR, which still provide the most comprehensive and detailed assessment of economic activity.

2017 Rebasing

The National Institute of Statistics of Rwanda finalised new series that are based on the 2017 weights replacing old series based on 2014 weights. The International best practice recommends doing it at least once in five years but in Rwanda it is compiled every three years due to the availability of information collected at a higher frequency. Note that the series from 2017 are based on the 2017 weights. For the years before 2017, the growth rates of old series are preserved by dividing the published indices by the linking factors found in the Table 7.

The IIP is produced based on monthly indicators of the volume of economic activity for eleven Rwanda Classification of Products by Activity (RCPA). These are weighted together based on the gross value added in the reference year for the series (currently, 2017), consistent with the estimates of published value added within the Gross Domestic Product series, see Table 8.

The correspondence table between RCPA and ISIC (International Standard Industrial Classification) Revision 4 is shown in Table 9.

Table 7: Linking factors between old base and new base (linking year = 2017)

Activity	Linking factors
Mining and quarrying	1.29
Food processing	1.28
<i>Manufacturing of beverages and tobacco</i>	<i>1.00</i>
<i>Manufacturing of textiles, clothing, & leather goods</i>	<i>2.25</i>
<i>Manufacturing of wood and paper; & printing</i>	<i>1.18</i>
<i>Manufacturing of chemicals, rubber & plastic products</i>	<i>1.62</i>
<i>Manufacturing of non-metallic mineral products</i>	<i>1.95</i>
<i>Manufacturing of metal products, machinery & equipment</i>	<i>1.69</i>
<i>Furniture and other manufacturing</i>	<i>1.23</i>
Electricity	1.32
Water and waste management	1.14
General Index	1.29

Source: NISR/ Index of Industrial Production

N.B: -The series from 2017 are based on the new weights.

-For the years before 2017, the growth rates of old series are preserved by dividing the old series by the above linking factors

Table 8: 2017 Gross Value Added

Activity	Gross Value Added (RWF, billions)	Percentage of total GVA
Mining & quarrying	57.4	13.0%
Manufacturing of food processing	105.8	23.9%
Manufacturing of beverages & tobacco	75.3	17.0%
Manufacturing of textiles, clothing & leather goods	19.9	4.5%
Manufacturing of wood & paper; printing	11.5	2.6%
Manufacturing of chemicals, rubber & plastic products	25.0	5.7%
Manufacturing of non-metallic mineral products	22.4	5.1%
Manufacturing of metal products, machinery & equipment	20.0	4.5%
Furniture & other manufacturing	15.0	3.4%
Electricity	83.6	18.9%
Water & waste management	6.2	1.4%
Total	442.1	100.0%

Source: NISR/ Index of Industrial Production

Table 9: Matching table between Rwanda Products Classification by Activity (RCPA) and International Standard Industrial Classification Revision 4 (ISIC Rev 4)

RCPA (Rwanda Classification of Products by Activity)			ISIC Rev.4 (here R stands for Rwanda)		
Code	Level	Description	Code	Code1	Description
B	2	Mining and quarrying	R	RB	Mining and quarrying
CA	4	Manufacturing of food	RC	RC10	Manufacture of food products
CB	4	Manufacturing of beverages & tobacco	RC	RC11	Manufacture of beverages
			RC	RC12	Manufacture of tobacco products
CC	4	Manufacturing of textiles, clothing & leather goods	RC	RC13	Manufacture of textiles
			RC	RC14	Manufacture of wearing apparel
			RC	RC15	Manufacture of leather and related products
CD	4	Manufacturing of wood & paper; printing	RC	RC16	Manufacture of wood and of products of wood and cork, except furniture; Manufacture of articles of straw and plaiting materials
CD	4	Manufacturing of wood & paper; printing	RC	RC17	Manufacture of paper and paper products
			RC	RC18	Printing and reproduction of recorded media
CE	4	Manufacturing of chemicals, rubber & plastic products	RC	RC19	Manufacture of coke and refined petroleum products
			RC	RC20	Manufacture of chemicals and chemical products
			RC	RC21	Manufacture of pharmaceuticals, medicinal chemical and botanical products
			RC	RC22	Manufacture of rubber and plastics products
CF	4	Manufacturing of non-metallic mineral products	RC	RC23	Manufacture of other non-metallic mineral products
CG	4	Manufacturing of metal products, machinery & equipment	RC	RC24	Manufacture of basic metals
			RC	RC25	Manufacture of fabricated metal products, except machinery and equipment
			RC	RC26	Manufacture of computer, electronic and optical products
			RC	RC27	Manufacture of electrical equipment
			RC	RC28	Manufacture of machinery and equipment n.e.c.
			RC	RC29	Manufacture of motor vehicles, trailers and semi-trailers
			RC	RC30	Manufacture of other transport equipment
CH	4	Furniture & other manufacturing	RC	RC31	Manufacture of furniture
			RC	RC32	Other manufacturing
			RC	RC33	Repair and installation of machinery and equipment
D	2	Electricity	RD	RD35	Electricity, gas, steam and air conditioning supply
E	2	Water & waste management	RE	RE36	Water collection, treatment and supply

Source: NISR/ Index of Industrial Production

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