



REPUBLIC OF RWANDA



JULY 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.

July 2023
Index of
Industrial
Production
(IIP)

September 2023

NATIONAL INSTITUTE OF STATISTICS OF RWANDA

Monthly Index of Industrial Production– Formal Activity–July 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 July 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 July 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.

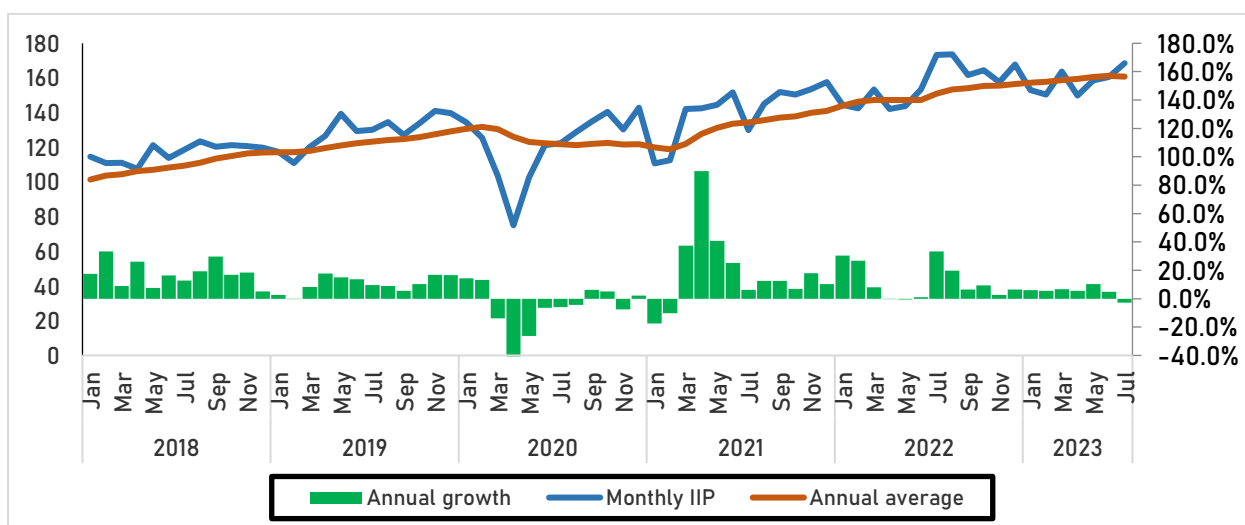
2. Highlights of IIP/ Summary

In July 2023, the industrial output (formal sector) decreased by 2.7 percent compared to July 2022, against an increase of 6.5 percent on annual average basis.

Activities performed as follows:

- Mining and quarrying decreased by 37.2 percent
- Manufacturing increased by 2.4 percent
- Electricity decreased by 10.7 percent; and
- Water and waste management increased by 3.2 percent

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



Source: NISR/ Index of Industrial Production

3. Details

Some activities have contributed positively, and other activities have contributed negatively to the overall index.

The manufacturing activity has registered positive changes in some of its components. The positive change in manufacturing activity is mainly due to 99.1 percent increase in manufacturing of non-metallic mineral products. However, the decrease of 16.1 percent in food processing tempered the positive change in manufacturing.

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

| Activity | Weights | % Changes in July 2023 | | | Contributions to annual change |
|--|-------------|------------------------|--------------|----------------|--------------------------------|
| | | On June 2023 | On July 2022 | Annual average | |
| Mining and quarrying | 13.0% | -2.8% | -37.2% | 24.6% | -2.6 |
| Manufacturing of: | | | | | |
| <i>Food processing</i> | 23.9% | 2.3% | -16.1% | -4.3% | -3.9 |
| <i>Beverages and tobacco</i> | 17.0% | 10.0% | -2.9% | 1.2% | -0.5 |
| <i>Textiles, clothing & leather goods</i> | 4.5% | 3.7% | 16.9% | 10.2% | 1.4 |
| <i>Wood, paper; and printing</i> | 2.6% | -4.8% | 10.8% | 41.6% | 0.4 |
| <i>Chemicals, rubber, & plastic products</i> | 5.7% | -4.9% | -4.5% | 2.6% | -0.4 |
| <i>Non-metallic mineral products</i> | 5.1% | 54.3% | 99.1% | 21.8% | 4.6 |
| <i>Metal products, machinery & equipment</i> | 4.5% | 0.7% | 11.3% | 13.7% | 0.6 |
| <i>Furniture and other manufacturing</i> | 3.4% | -6.6% | -15.4% | 4.0% | -0.5 |
| Electricity | 18.9% | -0.3% | -10.7% | 8.0% | -1.8 |
| Water & waste management | 1.4% | 8.0% | 3.2% | 6.9% | 0.0 |
| General Index | 100% | 4.9% | -2.7% | 6.5% | -2.7 |

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 | 149.9 |
| May | 73.4 | 76.0 | 86.2 | 112.7 | 121.2 | 139.3 | 102.8 | 144.6 | 143.7 | 158.5 |
| Jun | 70.8 | 82.8 | 97.2 | 97.7 | 113.8 | 129.4 | 121.2 | 151.6 | 153.3 | 160.6 |
| Jul | 96.3 | 87.8 | 103.0 | 105.4 | 118.8 | 130.1 | 122.4 | 130.0 | 173.3 | 168.6 |
| 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 | 64.9 |
| May | 66.6 | 62.9 | 72.9 | 140.0 | 80.0 | 103.0 | 28.1 | 47.2 | 67.8 | 78.2 |
| Jun | 65.6 | 70.3 | 92.6 | 80.8 | 60.3 | 52.2 | 70.2 | 91.1 | 73.7 | 60.7 |
| Jul | 120.1 | 80.5 | 105.1 | 119.0 | 54.4 | 65.2 | 53.3 | 19.7 | 93.9 | 58.9 |
| 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 | 162.8 |
| May | 77.7 | 82.9 | 94.2 | 104.5 | 128.2 | 146.1 | 124.7 | 151.1 | 140.1 | 172.8 |
| Jun | 72.9 | 95.9 | 104.9 | 105.8 | 133.4 | 160.2 | 146.9 | 155.3 | 162.7 | 188.2 |
| Jul | 79.1 | 95.7 | 103.3 | 100.2 | 134.0 | 141.3 | 152.7 | 140.0 | 196.4 | 201.2 |
| 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 | 159.6 |
| May | 76.7 | 90.5 | 96.1 | 102.3 | 112.1 | 121.6 | 114.7 | 136.0 | 153.1 | 176.5 |
| Jun | 75.2 | 76.2 | 90.7 | 97.0 | 110.2 | 115.4 | 115.6 | 140.6 | 149.9 | 137.3 |
| Jul | 75.6 | 83.4 | 91.0 | 102.7 | 115.3 | 122.4 | 124.3 | 139.3 | 153.4 | 136.9 |
| 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 | 148.9 |
| May | 90.1 | 88.3 | 97.3 | 101.5 | 100.8 | 110.0 | 107.2 | 127.8 | 146.4 | 154.7 |
| Jun | 90.7 | 87.3 | 99.5 | 105.1 | 103.5 | 109.5 | 114.4 | 142.7 | 150.1 | 154.3 |
| Jul | 93.1 | 90.1 | 104.4 | 107.2 | 113.2 | 118.4 | 124.5 | 155.4 | 161.5 | 166.7 |
| 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 |
| CH | 4 | Furniture & other manufacturing | RC | RC30 | Manufacture of other transport equipment |
| | | | RC | RC31 | Manufacture of furniture |
| | | | RC | RC32 | Other manufacturing |
| 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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