



NATIONAL INSTITUTE OF STATISTCS OF RWANDA

## NATIONAL BANK OF RWANDA

PRODUCER PRICE INDEX FOR
MANUFACTURING SECTOR (PPI-M)
SECOND QUARTER 2008

#### Background

This is the fourteenth issue of monthly Producer Price Index for the Manufacturing sector (PPI-M). Work on the development of the methodology for the construction of the PPI-M started in March 2003 with technical assistance from the IMF East AFRITAC and financial assistance from the UK DFID. The PPI project is a joint project between the National Statistics Institute of Rwanda (NSIR) and the National Bank of Rwanda (NBR).

Table 1a: Monthly Producer Price Indices by activity group: **Second Quarter 2008 Goods Produced mainly for local sales**(Base Period: Fourth Quarter 2003 = 100)

|  |        |       | 2007  | 1     | 2000  |       |       |
|--|--------|-------|-------|-------|-------|-------|-------|
| Activity group   | Weight | 2007  |       |       | 2008  |       |       |
| PPI for Mainly Local Sold  |        | April | May   | June  | April | May   | June  |
| products   | 1000   | 126.7 | 126.8 | 126.6 | 139.6 | 141.0 | 146.7 |
| % change, previous month   | 2000   | 0.2   | 0.0   | -0.1  | 2.0   | 1.0   | 4.0   |
| % change, 12 months  |        | 4.7   | 4.7   | 3.2   | 10.2  | 11.2  | 15.8  |
| Food Products, Beverages and<br>Tobacco  | 456    | 122.0 | 122.1 | 121.8 | 129.9 | 132.0 | 133.7 |
| % change, previous month   |        | 0.2   | 0.1   | -0.3  | 2.0   | 1.7   | 1.3   |
| % change, 12 months  |        | 4.6   | 5.4   | 4.5   | 6.4   | 8.1   | 9.8   |
| Food Products  | 129    | 144.6 | 145.0 | 143.7 | 168.2 | 169.5 | 175.3 |
| % change, previous month   |        | 0.5   | 0.3   | -0.9  | 6.9   | 0.7   | 3.4   |
| % change, 12 months  |        | -2.6  | -0.3  | -2.7  | 16.3  | 16.9  | 22.0  |
| Production, processing and preserving of meat and meat products                        | 3      | 166.8 | 166.8 | 166.8 | 175.8 | 175.8 | 175.8 |
| Processing and preserving of fruits and  |        |       |       |       |       |       |       |
| vegetables   | 8      | 143.9 | 143.9 | 143.9 | 145.7 | 145.7 | 145.7 |
| Manufacture of dairy products  | 32     | 142.5 | 142.5 | 148.9 | 155.7 | 155.7 | 155.7 |
| Manufacture of grain mill and animal feeds products                                    | 27     | 125.4 | 125.4 | 123.3 | 159.1 | 160.5 | 160.8 |
| Manufacture of bakery products, pastry, biscuits                                       | 13     | 129.3 | 129.3 | 129.3 | 189.6 | 198.6 | 199.2 |
| Manufacture of sugar   | 45     | 160.8 | 161.9 | 155.0 | 179.9 | 179.9 | 196.2 |
| Beverages and Tobacco  | 327    | 113.0 | 113.0 | 113.0 | 114.6 | 117.2 | 117.2 |
| % change, previous month   |        | 0.0   | 0.0   | 0.0   | -0.7  | 2.2   | 0.0   |
| % change, 12 months  |        | 8.6   | 8.6   | 8.6   | 1.4   | 3.7   | 3.7   |
| Manufacture of beer, soft drinks and tobacco   | 327    | 113.0 | 113.0 | 113.0 | 114.6 | 117.2 | 117.2 |
| Other than Food, Beverages and   | 327    | 115.0 | 113.0 | 115.0 | 111.0 | 117.2 | 117.2 |
| Tobacco  | 544    | 130.7 | 130.6 | 130.7 | 147.8 | 148.4 | 157.5 |
| % change, previous month   |        | 0.2   | 0.0   | 0.1   | 2.0   | 0.4   | 6.1   |
| % change, 12 months  |        | 4.8   | 4.2   | 2.2   | 13.1  | 13.6  | 20.5  |
|  |        |       |       |       |       |       |       |
| Manufacture of textiles, wearing apparel,<br>tanning and dressing of leather           | 47     | 123.2 | 123.2 | 123.2 | 138.1 | 144.3 | 145.4 |
| Manufacture of paper and paper products, publishing of books, newspapers               | 40     | 122.3 | 122.6 | 122.6 | 124.4 | 124.3 | 123.7 |
| Manufacture of chemical products   | 172    | 117.5 | 118.0 | 117.9 | 137.4 | 137.4 | 138.5 |
| Manufacture of plastic products,<br>tubes,retreading and rebuilding of rubber<br>tyres | 45     | 138.5 | 136.5 | 136.5 | 148.5 | 148.5 | 148.5 |
| •  | -      |       |       |       |       |       |       |
| Manufacture of ceramic products, cement, lime and articles of concrete                 | 126    | 138.6 | 138.6 | 138.6 | 142.6 | 142.6 | 180.7 |
| Manufacture of fabricated metal products   | 70     | 157.1 | 156.8 | 156.8 | 204.7 | 204.7 | 204.4 |
| Manufacture of furniture   | 43     | 122.1 | 125.9 | 125.7 | 144.3 | 144.3 | 144.4 |

Source: Quarterly Producer Price Index Survey

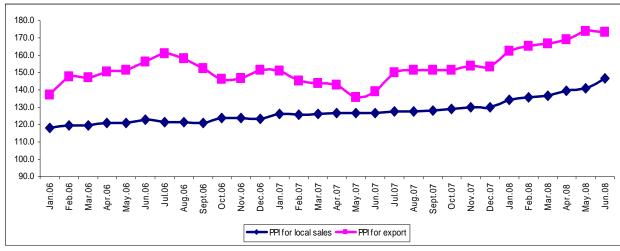
Table 1b: Monthly Producer Price Indices by activity group: **Second Quarter 2008**Goods produced mainly for export

(Base Period: Fourth Quarter 2003 = 100)

| Activity group   | Weight | 2007  |       |       | 2008  |       |       |
|--|--------|-------|-------|-------|-------|-------|-------|
|  |        | April | May   | June  | April | May   | June  |
| PPI for Mainly Export<br>Products                          | 1000   | 143.0 | 135.8 | 138.2 | 168.9 | 173.8 | 173.1 |
| % change, previous month                                   |        | -0.6  | -5.1  | 1.7   | 2.4   | 2.9   | -0.4  |
| % change, 12 months  |        | -4.9  | -10.3 | -11.5 | 18.1  | 28.0  | 25.3  |
| Manufacture of other food products n.e.c                   | 978    | 146.6 | 137.2 | 139.6 | 168.8 | 173.3 | 172.2 |
| % change, previous month                                   |        | -0.6  | -6.4  | 1.8   | 2.3   | 2.6   | -0.6  |
| % change, 12 months  |        | -4.6  | -10.1 | -11.3 | 15.2  | 26.3  | 23.4  |
| Production of tea  | 585    | 100.3 | 91.3  | 95.6  | 130.6 | 135.4 | 133.4 |
| % change, previous month                                   |        | -3.6  | -9.0  | 4.7   | 3.5   | 3.7   | -1.5  |
| % change, 12 months  |        | 11.3  | 9.4   | 5.3   | 30.3  | 48.4  | 39.6  |
| Production of coffee                                       | 392    | 210.7 | 205.7 | 205.3 | 225.8 | 229.6 | 230.2 |
| % change, previous month                                   |        | 1.7   | -2.4  | -0.2  | 1.6   | 1.7   | 0.2   |
| % change, 12 months  |        | -20.6 | -29.3 | -27.7 | 7.1   | 11.6  | 12.1  |
| Manufacture of pesticides and other agro-chemical products | 22     | 74.5  | 74.1  | 74.1  | 173.4 | 196.9 | 210.9 |
| % change, previous month                                   |        | -0.6  | -0.6  | 0.0   | 0.0   | 13.5  | 7.1   |
| % change, 12 months  |        | -23.2 | -23.7 | -23.7 | 132.9 | 165.9 | 184.9 |
| Production of pyrethrum                                    | 22     | 74.5  | 74.1  | 74.1  | 173.4 | 196.9 | 210.9 |

Source: Quarterly Producer Price Index Survey

Graph1: PPI for local sales and export products (Fourth quarter 2003=100)



Source: Quarterly Producer Price Index Survey

# **I. PPI-M** (Base year: 4<sup>th</sup> Quarter 2003 =100)

1.1 PPI-M: Local sales (tables 1a)

At the end of June 2008 the index for products manufactured for sale on the local market stood at 146.7, following an increase of 2.0% in April, 1.0% in May and 4.0% in June. In June, the Producer Price Index reached at 146.7 after 139.6 and 141.0 attained in April and May respectively. (See table 1a).

However, compared to June 2007(126.6), the index for June 2008 was 15.8% higher. This rise is due to increase in the sub group« Food products, beverages and tobacco» which moved from 121.8 in June 2007 to reach at 133.7 in June 2008, that is an increase of 9.8% and subgroup « Other than Food, beverages and tobacco» which increased by 20.5%, that is from 130.7 in June 2007 to 157.5 in June 2008. There was 9.8% increase in the sub group« Food products, beverages and tobacco» when comparing the last month of the quarter under review (June 2008) with the corresponding month of the previous year (June 2007), of which subgroup« Food products,» rose by 22.0% due to the following development; «Manufacture of bakery products, and biscuits» (+54.1%), «Manufacture of grain flour and animal feeds products» (+30.5%), «Manufacture of sugar» (26.6%), «Production, processing and preserving of meat and meat products» (+5.4%), «Manufacture of dairy products» (+4.5%). The higher increase was noted in the groups which mainly was affected by the shortage of food products in the world market. This is especially in the case of bakeries and biscuits which use wheat flour as their main raw materials. Also sugar prices increases due to shortage of sugar as the firm was undergoing a major reparation from mid April to midi June.

On the other hand, index for subgroup « Other than Food, Beverages and Tobacco » moved upward due to the overall effect of price changes in the following groups: « Manufacture of fabricated metal products »(+30.4%), «Manufacture of ceramic products, cement, lime and articles of concrete » (+29.8%), « Manufacture of chemical products » (+17.7%), « Manufacture of textiles, wearing apparel, tanning and dressing of leather products» (+18.0%), and « Manufacture of furniture » (+14.8%). Higher selling prices reflected the increase in cost of production resulted from the higher prices paid for the raw materials which most of the establishments are facing from the start of the year.

1.2 PPI-M Exports (table1b)

As shown in the table 1b, the PPI-M for goods mainly produced for exports stood at 168.9 in April,

173.8 in May and at 173.1 in June, that is an increase of 2.4% and 2.9% in April and May respectively

whereas there is decrease of 0.4% in June. Of which coffee exports registered an increase of 1.6%,

1.7% and 0.2% in April, May and June respectively. On the other hand, export price index of tea grew

by 3.5% and 3.7% in April and May respectively whereas in June it declined by 1.5%. The price

fluctuations for both coffee and tea are caused by price changes on the international market. On annual

basis, during the last twelve months the index for June 2007 (138.2) compared to the index for June

2008 (173.1) was 25.3% higher. This decrease was mainly attributable to higher prices fetched for

pyrethrum (+184.9%) due to improvement in quality, tea (+39.6%), and coffee increased by 12.1%.

II. Analysis of trends- Quarterly Change

2.1 PPI-M Local sales

Compared to the previous quarter, the index of the second quarter increased by 4.7%. On annual basis,

the PPI-M for local sold products went up by 12.4% as it rose from 126.7 in the second quarter of year

2007 to reach at 142.4 in the second quarter of year 2008.

2.2 PPI-M Exports

The index for manufacturing exports which stood at 164.7 in the first quarter reached at 171.9 in the

second quarter of the year 2008, which is an increase of 4.7%. Compared to the same quarter of the

previous year, the quarterly change was 23.7%. This increase is due to price increase for pyrethrum

(+161.1%), tea (+39.1%) and coffee (+10.3%).

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#### **Technical Note on PPI-M**

- **1. Scope and composition:** For the purpose of these indices, manufacturing encompass all products produced for sale on the domestic market as well as for the exports that is divisions 15 to 36. The PPI-M will initially cover manufacturing establishments that operate with 10 or more workers.
- **2. Items and weights:** These indices are fixed weight indices. The weights were obtained from the gross output value reported by manufacturers at the 2000 Census of Industrial Production conducted in 2001. Gross output is valued at basic prices, and thus excludes all taxes on products, namely excise duties and Value added tax. Each selected product is assigned a weight representing its share in the total turnover for the fourth quarter of 2003 as reported by the establishments.
- **3. Price information:** The point of pricing is the establishment. The price is the selling price received by the producer for the selected product as it leaves the factory gate. In general prices are collected at mid point of each month.
- **4. Reference base period for PPI\_M:** The reference period for the calculation of PPI-M is the fourth quarter 2003. The base price for a particular product is an arithmetic mean of the fourth quarter monthly prices in 2003.
- **5. Index formula:** The PPI is calculated according to the Laspeyres formula, which is the weighted average of price relatives.

$$I_{c} = \sum \frac{w_{i} * (P_{ci}/P_{oi})}{\sum w_{i}} * 100$$

Where Ic = Index for current month

W<sub>i</sub> = Weight associated with product i

 $P_{ci}$  = Price of product i for the current month

 $P_{oi}$  = Price for product i for the reference period

### 6. Uses of the PPI

The main uses of the PPI are:

- As a leading indicator of inflationary trends.
- As deflators for national accounting at constant prices.
- ➤ As "escalators' to adjust prices of inputs in long term sales contracts.
- **7. Dissemination of PPI-M:** The monthly PPI-M will be published in each quarter, about 8 weeks following the quarter under review.

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