BNR

## PRODUCER PRICE INDEX FOR MANUFACTURING SECTOR (PPI-M)

## THIRD QUARTER 2011

## Background

This is the twenty seventh publication 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 Institute of Statistics of Rwanda (NSIR) and the National Bank of Rwanda (NBR).

Table 1: Monthly Producer Price Indices by activity group: Third Quarter 2011 Goods Produced mainly for local sales
(Base Period: Fourth Quarter $2003=100$ )

| Activity group | Weight | 2010 |  |  | 2011 |  |  | $\frac{2010}{3^{\mathrm{e}} \mathrm{Qrt}}$ | $\begin{array}{r} 2011 \\ \hline 3^{\mathrm{e} Q r t} \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Jul. | Aug. | Sept. | Jul. | Aug. | Sept. |  |  |
| PPI for Mainly Local Sold products | 1000 | 163.19 | 162.81 | 162.92 | 172.28 | 172.27 | 173.90 | 162.97 | 172.82 |
| \% change, previous month/quarter ${ }^{(*)}$ <br> \% change, 12 months |  | $\begin{array}{r} -0.05 \\ 5.36 \\ \hline \end{array}$ | $\begin{array}{r} -0.23 \\ 6.31 \\ \hline \end{array}$ | $\begin{aligned} & 0.07 \\ & 6.40 \\ & \hline \end{aligned}$ | $\begin{array}{r} 2.14 \\ 5.57 \\ \hline \end{array}$ | $\begin{array}{r} -0.01 \\ 5.81 \\ \hline \end{array}$ | $\begin{array}{r} 0.95 \\ 6.74 \\ \hline \end{array}$ | $\begin{array}{r} -0.21 \\ 0.00 \\ \hline \end{array}$ | $\begin{array}{r} 2.96 \\ 6.04 \\ \hline \end{array}$ |
| Food Products, Beverages and Tobacco | 456 | 163.39 | 162.69 | 162.71 | 178.85 | 178.82 | 177.69 | 162.93 | 178.45 |
| \% change, previous month/quarter ${ }^{(*)}$ <br> \% change, 12 months |  | $\begin{array}{r} 0.07 \\ 6.53 \\ \hline \end{array}$ | $\begin{array}{r} -0.43 \\ 8.81 \\ \hline \end{array}$ | $\begin{aligned} & 0.01 \\ & 8.88 \\ & \hline \end{aligned}$ | $\begin{array}{r} 7.76 \\ 9.46 \\ \hline \end{array}$ | $\begin{array}{r} -0.02 \\ 9.92 \\ \hline \end{array}$ | $\begin{array}{r} -0.63 \\ 9.21 \\ \hline \end{array}$ | $\begin{array}{r} -0.32 \\ 0.00 \\ \hline \end{array}$ | $\begin{aligned} & 8.69 \\ & 9.53 \\ & \hline \end{aligned}$ |
| Food products | 129 | 181.32 | 178.82 | 178.90 | 190.48 | 190.37 | 186.38 | 179.68 | 189.07 |
| \% change, previous month/quarter ${ }^{(*)}$ <br> \% change, 12 months |  | $\begin{array}{r} 0.23 \\ -4.11 \\ \hline \end{array}$ | $\begin{array}{r} -1.38 \\ 1.89 \\ \hline \end{array}$ | $\begin{aligned} & 0.04 \\ & 2.08 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.04 \\ & 5.05 \\ & \hline \end{aligned}$ | $\begin{array}{r} -0.06 \\ 6.45 \\ \hline \end{array}$ | $\begin{array}{r} -2.09 \\ 4.18 \\ \hline \end{array}$ | $\begin{array}{r} -1.02 \\ 0.00 \\ \hline \end{array}$ | $\begin{aligned} & 2.69 \\ & 5.23 \\ & \hline \end{aligned}$ |
| Production, processing and preserving of meat and meat products | 3 | 220.85 | 220.85 | 220.85 | 220.92 | 220.92 | 220.92 | 220.85 | 220.92 |
| Processing and preserving of fruits and vegetables | 8 | 168.53 | 168.53 | 168.53 | 175.21 | 175.21 | 175.21 | 168.53 | 175.21 |
| Manufacture of dairy products | 32 | 212.10 | 212.10 | 212.10 | 217.47 | 217.47 | 201.27 | 212.10 | 212.07 |
| Manufacture of grain mill and animal feeds products | 27 | 150.61 | 150.88 | 151.41 | 182.62 | 182.10 | 182.10 | 150.97 | 182.27 |
| Manufacture of bakery products, pastry, biscuits | 13 | 172.89 | 172.89 | 172.89 | 191.77 | 191.77 | 191.77 | 172.89 | 191.77 |
| Manufacture of sugar | 45 | 180.18 | 172.90 | 172.81 | 176.52 | 176.52 | 176.52 | 175.30 | 176.52 |
| Beverages and Tobacco | 327 | 156.29 | 156.29 | 156.29 | 174.24 | 174.24 | 174.24 | 156.29 | 174.24 |
| \% change, previous month/quarter ${ }^{(*)}$ <br> \% change, 12 months |  | $\begin{gathered} 0.00 \\ 12.25 \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ 12.27 \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ 12.27 \\ \hline \end{gathered}$ | $\begin{aligned} & 11.49 \\ & 11.49 \\ & \hline \end{aligned}$ | $\begin{gathered} 0.00 \\ 11.49 \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ 11.49 \\ \hline \end{gathered}$ | $\begin{aligned} & 0.00 \\ & 0.00 \\ & \hline \end{aligned}$ | $\begin{aligned} & 11.49 \\ & 11.49 \end{aligned}$ |
| Manufacture of beer, soft drinks and tobacco | 327 | 156.29 | 139.20 | 143.99 | 156.29 | 156.29 | 156.29 | 146.49 | 156.29 |
| Other than Food, Beverages and Tobacco | 544 | 163.01 | 153.90 | 154.00 | 166.37 | 169.09 | 169.14 | 156.97 | 168.20 |
| \% change, previous month/quarter ${ }^{(*)}$ <br> \% change, 12 months |  | $\begin{array}{r} -0.16 \\ 4.39 \\ \hline \end{array}$ | $\begin{array}{r} -5.59 \\ -1.47 \\ \hline \end{array}$ | $\begin{array}{r} 0.07 \\ -1.40 \\ \hline \end{array}$ | $\begin{aligned} & -2.67 \\ & 2.06 \\ & \hline \end{aligned}$ | $\begin{aligned} & 1.64 \\ & 9.87 \\ & \hline \end{aligned}$ | $\begin{aligned} & 0.03 \\ & 9.83 \\ & \hline \end{aligned}$ | $\begin{array}{r} -3.81 \\ -3.70 \\ \hline \end{array}$ | $\begin{array}{r} -1.59 \\ 7.15 \\ \hline \end{array}$ |
| Manufacture of textiles, wearing apparel, tanning and dressing of leather | 47 | 147.23 | 146.22 | 146.16 | 175.12 | 174.37 | 174.95 | 146.54 | 174.81 |
| Manufacture of paper and paper products, publishing of books, newspapers | 40 | 144.22 | 120.09 | 121.57 | 145.01 | 147.33 | 147.33 | 128.63 | 146.55 |
| Manufacture of chemical products | 172 | 148.57 | 136.53 | 136.53 | 149.47 | 157.73 | 157.73 | 140.54 | 154.97 |
| Manufacture of plastic products, tubes, retreading and rebuilding of rubber tyres | 45 | 151.32 | 151.32 | 151.32 | 151.32 | 151.32 | 151.32 | 151.32 | 151.32 |
| Manufacture of ceramic products, cement, lime and articles of concrete | 126 | 195.98 | 182.52 | 182.52 | 196.08 | 196.08 | 196.08 | 187.01 | 196.08 |
| Manufacture of fabricated metal products | 70 | 172.71 | 168.16 | 168.16 | 177.27 | 177.27 | 177.27 | 169.67 | 177.27 |
| Manufacture of furniture | 43 | 155.93 | 159.44 | 159.44 | 156.00 | 156.00 | 156.00 | 158.27 | 156.00 |

## (*) Only for quarterly figures

Source: Quarterly Producer Price Index Survey

Table 1b: Monthly Producer Price Indices by activity group: Third Quarter 2011
Goods produced mainly for export
(Base Period: Fourth Quarter $2003=100$ )

| Activity group | Weight | 2010 |  |  | 2011 |  |  | $\frac{2010}{3^{\mathrm{e}} \mathrm{Qrt}}$ | $\begin{array}{r} 2011 \\ \hline 3^{\mathrm{e}} \mathrm{Qrt} \\ \hline \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Jul. | Aug. | Sept. | Jul. | Aug. | Sept. |  |  |
| PPI for Mainly Export Products | 1000 | 192.49 | 203.53 | 197.28 | 281.89 | 280.72 | 270.00 | 197.77 | 277.54 |
| \% change, previous month/quarter ${ }^{(*)}$ \% change, 12 months |  | $\begin{array}{r} 0.45 \\ 3.05 \\ \hline \end{array}$ | $\begin{aligned} & 5.74 \\ & 5.02 \\ & \hline \end{aligned}$ | $\begin{aligned} & -3.07 \\ & -0.36 \\ & \hline \end{aligned}$ | $\begin{gathered} 0.00 \\ 46.45 \end{gathered}$ | $\begin{gathered} -0.42 \\ 37.93 \end{gathered}$ | $\begin{gathered} -3.82 \\ 36.86 \\ \hline \end{gathered}$ | $\begin{aligned} & 2.59 \\ & 2.54 \\ & \hline \end{aligned}$ | $\begin{gathered} 0.06 \\ 40.34 \\ \hline \end{gathered}$ |
| Manufacture of other food products n.e.c | 978 | 187.74 | 198.53 | 192.14 | 276.96 | 275.76 | 264.80 | 192.81 | 272.51 |
| \% change, previous month/quarter ${ }^{(*)}$ <br> \% change, 12 months <br> Production of tea <br> \% change, previous month/quarter ${ }^{(*)}$ <br> \% change, 12 months <br> Production of coffee <br> \% change, previous month/quarter ${ }^{(*)}$ <br> \% change, 12 months | 585 392 | $\begin{gathered} 0.48 \\ 2.11 \\ \mathbf{1 4 8 . 5 9} \\ -0.62 \\ -4.81 \\ \mathbf{2 4 6 . 1 3} \\ 1.48 \\ 9.26 \\ \hline \end{gathered}$ | $\begin{gathered} 5.75 \\ 4.90 \\ \mathbf{1 6 2 . 9 2} \\ 9.65 \\ -1.55 \\ \mathbf{2 5 1 . 6 4} \\ 2.24 \\ 11.98 \\ \hline \end{gathered}$ | $\begin{gathered} -3.22 \\ -0.73 \\ \mathbf{1 6 0 . 7 7} \\ -1.32 \\ -4.26 \\ \mathbf{2 3 8 . 9 2} \\ -5.05 \\ 3.10 \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ 47.52 \\ \mathbf{1 7 9 . 3 2} \\ 1.73 \\ 20.68 \\ \mathbf{4 2 2 . 5 7} \\ -1.07 \\ 71.69 \\ \hline \end{gathered}$ | $\begin{gathered} -0.43 \\ 38.90 \\ \mathbf{1 8 6 . 6 8} \\ 4.11 \\ 14.58 \\ \mathbf{4 0 8 . 6 0} \\ -3.31 \\ 62.38 \\ \hline \end{gathered}$ | -3.97 37.82 $\mathbf{1 6 7 . 4 7}$ -10.29 4.17 $\mathbf{4 0 9 . 9 5}$ 0.33 71.58 | $\begin{gathered} 2.53 \\ 2.07 \\ \mathbf{1 5 7 . 4 3} \\ 2.76 \\ -3.52 \\ \mathbf{2 4 5 . 5 6} \\ 2.32 \\ 8.06 \\ \hline \end{gathered}$ | $\begin{gathered} 0.06 \\ 41.34 \\ \mathbf{1 7 7 . 8 2} \\ 3.33 \\ 12.95 \\ \mathbf{4 1 3 . 7 1} \\ -1.93 \\ 68.47 \\ \hline \end{gathered}$ |
| Manufacture of pesticides and other agro-chemical products | 22 | 401.41 | 423.63 | 423.63 | 499.18 | 499.18 | 499.18 | 416.22 | 499.18 |
| \% change, previous month/quarter ${ }^{(*)}$ <br> \% change, 12 months <br> Production of pyrethrum | 22 | $\begin{gathered} 0.00 \\ 27.31 \\ 401.41 \\ \hline \end{gathered}$ | $\begin{gathered} 5.54 \\ 7.49 \\ 423.63 \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ 7.43 \\ 423.63 \\ \hline \end{gathered}$ | $\begin{gathered} -0.02 \\ 24.36 \\ 499.18 \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ 17.84 \\ 499.18 \\ \hline \end{gathered}$ | $\begin{gathered} 0.00 \\ 17.84 \\ 499.18 \\ \hline \end{gathered}$ | $\begin{gathered} 3.69 \\ 13.13 \\ 416.22 \\ \hline \end{gathered}$ | $\begin{gathered} -0.02 \\ 19.93 \\ 499.18 \\ \hline \end{gathered}$ |

## (*) Only for quarterly figures

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. Monthly PPI-M (Base period: $4^{\text {th }}$ Quarter $2003=100$ )

### 1.1 PPI-M: Local sales (table 1a)

In September 2011, the index for products manufactured for sale on the local market stood at 173.90, which is a slight increase of $0.95 \%$ compared to the index of August 2011 (172.27).

On annual basis, the index for September 2011 was 6.74 \% higher. This increase is mainly attributable to price increases in the following subgroups: « Food products, beverages and tobacco» (+9.21\%) and «Other than food, beverages and tobacco » (+4.68\%). Within the subgroup «Food products, beverages and tobacco», prices of «Food products » rose by $4.18 \%$. The increase of $4.18 \%$ is due to price changes of the food products of which: «Manufacture of bakery products, pastry, and biscuits» (+10.92\%), «Manufacture of grain mill and animal feeds products» (+20.27\%), and «Processing and preserving of fruits and vegetables» (+3.96\%). However, «Manufacture of dairy products» (-5.11\%) has partially offset the positive trend of this subgroup.

The index of the subgroup « Other than food, beverages and tobacco » increased by $4.68 \%$ in September 2011 compared to the index of the same month of the year 2010. This increase is mostly attributable to the overall effect of price changes in the following classes: «Manufacture of textiles, wearing apparel, tanning and dressing of leather» (+26.95\%) and ««Manufacture of chemical products» (+10.72\%), Nevertheless, « Manufacture of plastic products, tubes, retreading and rebuilding of rubber tyres » $(-10.30 \%)$ » have partially dampened the positive trend of this subgroup.

### 1.2 PPI-M Exports (tablelb)

As shown in the table 1b, the index for goods mainly produced for exports stood at 281.89 in July, 280.72 in August and 270.00 in September 2011. Prices fetched for tea exports registered a decrease of $10.29 \%$ in September 2011 and increases of $1.73 \%$ and $4.11 \%$ in July and August 2011, respectively. On the other hand, export price of coffee retreated by $1.07 \%$ and $3.31 \%$ in July and August, respectively and registered an slight increase of 0.33\% in September 2011.

On an annual basis, the index of export products registered an increase of $36.86 \%$ in September 2011 compared to the index of the same month of the previous year.

## II. Quarterly PPI-M (Base period: $\mathbf{4}^{\text {th }}$ Quarter $2003=100$ )

### 2.1 PPI-M Local sales

The index for the third quarter registered an increase of $2.96 \%$ compared to the index of the previous quarter and an increase of $6.04 \%$ compared to the index of the third quarter of the year 2010.

### 2.2 PPI-M Exports

The quarterly index for manufacturing exports registered a slight increase of $0.06 \%$ in the third quarter of the year 2011 compared to the index of the previous quarter and an increase of $40.34 \%$ compared to the index of the same quarter of the previous year.

```
Contact Persons:
National Institute of Statistics of Rwanda (NISR):
    Acting Director General, MURANGWA Yusuf
    E-mail: yusuf.murangwa@statistics.gov.rw
```

NISR: Department of Economic Statistics:

Acting Director, MANZI Sébastien
E-mail: sebastien.manzi@statistics.gov.rw
Principal Research Statistician in charge of Prices, SIBOMANA Oscar
Tel.: (250) 788893 288, E-mail: oscar.sibomana@statistics.gov.rw
NBR: Department of Statistics
Senior Officer «Economic statistics », KAJIGIJA Eugène
Tel : (250) 788417 427, E-mail : ekaijgija@bnr.rw
Web sites: http:// www.statistics.gov.rw
http:// www.bnr.rw

## 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 PPIM 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.

$$
\mathrm{I}_{\mathrm{c}}=\sum \frac{w_{i} *\left(P_{c i} / P_{o i}\right)}{\sum w_{i}} * 100
$$

Where $I_{C}=$ Index for current month
$\mathrm{W}_{\mathrm{i}}=$ Weight associated with product i
$\mathrm{P}_{\mathrm{ci}}=$ Price of product i for the current month
$P_{o i}=$ 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.

