



NATIONAL INSTITUTE OF  
STATISTICS OF RWANDA



NATIONAL BANK OF RWANDA

**PRODUCER PRICE INDEX FOR  
MANUFACTURING SECTOR (PPI-M)  
THIRD QUARTER 2007**

**Background**

This is the eleventh 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 Institute of Statistics of Rwanda (NSIR) and the National Bank of Rwanda (NBR).

Table 1a: Monthly Producer Price Indices by activity group: **Third Quarter 2007**  
**Goods Produced mainly for local sales**  
*(Base Period: Fourth Quarter 2003 = 100)*

Activity group	Weight	2006			2007		
		Jul.	Aug.	Sept.	Jul.	Aug.	Sept.
<b>PPI for Mainly Local Sold products</b>	<b>1000</b>	<b>121.2</b>	<b>121.4</b>	<b>122.7</b>	<b>127.5</b>	<b>127.4</b>	<b>128.0</b>
<i>% change, previous month</i>		<i>-1.3</i>	<i>0.2</i>	<i>1.1</i>	<i>0.7</i>	<i>-0.1</i>	<i>0.5</i>
<i>% change, 12 months</i>		<i>3.9</i>	<i>4.1</i>	<i>2.4</i>	<i>5.2</i>	<i>4.9</i>	<i>4.3</i>
<b>Food Products, Beverages and Tobacco</b>	<b>456</b>	<b>117.6</b>	<b>117.4</b>	<b>115.8</b>	<b>123.1</b>	<b>122.6</b>	<b>122.6</b>
<i>% change, previous month</i>		<i>0.9</i>	<i>-0.2</i>	<i>-1.3</i>	<i>1.0</i>	<i>-0.4</i>	<i>0.0</i>
<i>% change, 12 months</i>		<i>4.8</i>	<i>4.6</i>	<i>3.4</i>	<i>4.7</i>	<i>4.5</i>	<i>5.8</i>
<b>Food Products</b>	<b>129</b>	<b>151.6</b>	<b>150.8</b>	<b>145.3</b>	<b>148.6</b>	<b>146.7</b>	<b>146.6</b>
<i>% change, previous month</i>		<i>2.6</i>	<i>-0.5</i>	<i>-3.7</i>	<i>3.1</i>	<i>-1.2</i>	<i>-0.1</i>
<i>% change, 12 months</i>		<i>12.6</i>	<i>13.5</i>	<i>10.0</i>	<i>-2.0</i>	<i>-2.7</i>	<i>0.9</i>
Production, processing and preserving of meat and meat products	3	143.1	143.1	143.1	170.6	170.6	170.6
Processing and preserving of fruits and vegetables	8	141.1	141.1	141.1	143.9	143.9	143.9
Manufacture of dairy products	32	141.1	141.1	141.1	148.9	148.9	148.9
Manufacture of grain mill and animal feeds products	27	124.7	124.6	132.4	145.3	145.6	145.9
Manufacture of bakery products, pastry, biscuits	13	128.0	127.9	127.9	135.3	135.4	135.4
Manufacture of sugar	45	184.7	182.6	162.0	153.6	148.1	147.5
<b>Beverages and Tobacco</b>	<b>327</b>	<b>104.1</b>	<b>104.1</b>	<b>104.1</b>	<b>113.0</b>	<b>113.0</b>	<b>113.0</b>
<i>% change, previous month</i>		<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
<i>% change, 12 months</i>		<i>0.8</i>	<i>0.0</i>	<i>0.0</i>	<i>8.6</i>	<i>8.6</i>	<i>8.6</i>
Manufacture of beer, soft drinks and tobacco	327	104.1	104.1	104.1	113.0	113.0	113.0
<b>Other than Food, Beverages and Tobacco</b>	<b>544</b>	<b>124.1</b>	<b>124.8</b>	<b>128.5</b>	<b>131.1</b>	<b>131.4</b>	<b>132.5</b>
<i>% change, previous month</i>		<i>-2.9</i>	<i>0.5</i>	<i>3.0</i>	<i>0.4</i>	<i>0.2</i>	<i>0.8</i>
<i>% change, 12 months</i>		<i>3.1</i>	<i>3.8</i>	<i>1.7</i>	<i>5.6</i>	<i>5.3</i>	<i>3.1</i>
Manufacture of textiles, wearing apparel, tanning and dressing of leather	47	123.2	123.2	123.2	125.7	125.7	125.8
Manufacture of paper and paper products, publishing of books, newspapers	40	116.4	122.5	122.6	122.6	123.5	122.8
Manufacture of chemical products	172	108.7	108.9	120.9	117.7	118.0	121.3
Manufacture of plastic products, tubes, retreading and rebuilding of rubber tyres	45	134.0	134.6	134.4	137.1	137.2	137.8
Manufacture of ceramic products, cement, lime and articles of concrete	126	129.0	129.0	129.0	139.2	139.6	140.3
Manufacture of fabricated metal products	70	155.4	156.0	156.1	157.0	157.0	157.0
Manufacture of furniture	43	118.7	118.7	118.7	127.0	127.0	125.5

Source: Quarterly Producer Price Index Survey

Table 1b: Monthly Producer Price Indices by activity group: **Third Quarter 2007**  
Goods produced mainly for export

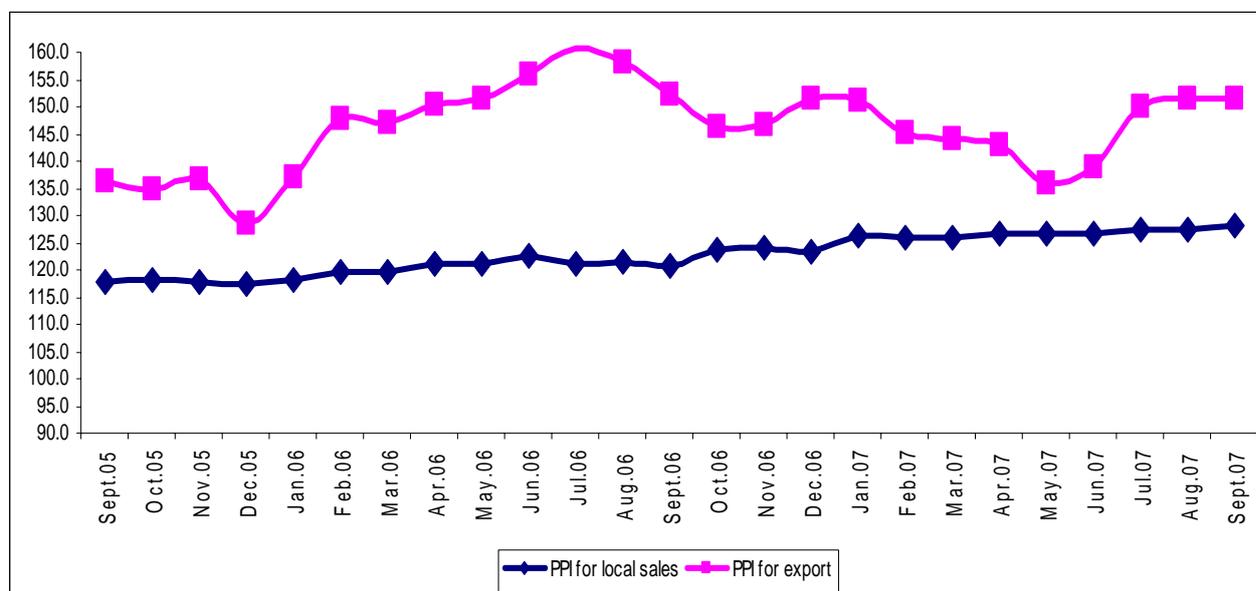
(Base Period: Fourth Quarter 2003 = 100)

Activity group	Weight	2006			2007		
		Jul.	Aug.	Sept.	Jul.	Aug.	Sept.
<b>PPI for Mainly Export Products</b>	<b>1000</b>	<b>160.9</b>	<b>158.2</b>	<b>152.3</b>	<b>150.4</b>	<b>150.0</b>	<b>154.6</b>
<i>% change, previous month</i>		3.0	-1.7	-3.7	8.8	-0.3	3.0
<i>% change, 12 months</i>		15.7	11.8	11.9	-6.5	-5.2	1.5
<b>Manufacture of other food products n.e.c</b>	<b>978</b>	<b>162.4</b>	<b>159.6</b>	<b>153.6</b>	<b>147.6</b>	<b>149.4</b>	<b>154.1</b>
<i>% change, previous month</i>		3.1	-1.7	-3.8	5.7	1.3	3.1
<i>% change, 12 months</i>		14.0	16.5	12.1	-9.1	-6.4	0.3
Production of tea	585	135.0	130.3	120.8	102.9	105.0	111.3
Production of coffee	392	203.4	203.4	202.6	214.2	215.7	217.9
<b>Manufacture of pesticides and other agro-chemical products</b>	<b>22</b>	<b>95.4</b>	<b>95.4</b>	<b>95.4</b>	<b>273.6</b>	<b>174.8</b>	<b>174.8</b>
<i>% change, previous month</i>		-1.7	0.0	0.0	269.5	-36.1	0.0
<i>% change, 12 months</i>		-2.1	-2.1	-2.1	186.8	83.2	83.2
Production of pyrethrum	22	97.0	97.0	97.0	273.6	174.1	174.1

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)*

In September 2007, the index for products manufactured for sale on local market stood at 128.0, following an increase of 0.7% in July, 0.5% in September and a slight decrease of 0.1% in August. To this effect, the index for « Food products, beverages and tobacco» rose by 1.0% in July and declined by 0.4% in August while remaining unchanged in September. On the other hand the index for «Other products than food, beverage and tobacco» has increased by 0.4%, 0.2% and 0.8% in July, August and September respectively (See table 1a).

However during the last twelve months, the index for the manufactured products sold on local market rose by 5.2%, 4.9% and 4.3% in July, August and September respectively.

The 4.3% increase in September 2007 (128.0) when compared to the same month of 2006 is due to the increase in the sub group of « Food products, beverages and tobacco» which went from 115.8 in September 2006 to 122.6 in the corresponding month of the year 2007, that is an increase of 5.8% and the subgroup of « Other than Food, beverages and tobacco» which increased by 3.1% when compared to the corresponding month of the year 2006. In the subgroup of « Food products, beverages and tobacco», food products have increased by 0.9% while beverages and tobacco increased by 8.6% as a result of the increase in consumption tax which rose from 57% to 60% effective from January 2007. In the subgroup of « Food products», the rise was a result of an increase in «Production, processing and preserving of meat and meat products» (+19.3%), «Manufacture of grain flour and animal feeds products» (+10.2%), «Manufacture of bakery products, and biscuits» (+5.8%), «Manufacture of dairy products» (+5.5%), whereas «Manufacture of sugar» declined by (-9.0%) as a result of competitiveness factor resulting in the imported sugar which is normally cheap compared to local produced sugar. ***Other increases are due to the increase in the cost of production emanating from higher prices of raw materials. That is, there was an increase in prices of wheat flour and cooking oil which are the main inputs in bakeries.***

On the other hand, the index for subgroup of « Other than Food, Beverages and Tobacco » went upward due to the overall effect of price changes in the following groups: «Manufacture of ceramic products, cement, lime and articles of concrete » (+8.8%), « Manufacture of furniture » (+5.8%), and « Manufacture of plastic products, tubes, retreating and rebuilding of rubber tyres» (+2.6%), and « Manufacture of textiles, wearing apparel, tanning and dressing of leather »(+2.1%).

### **1.2 PPI-M Exports (table1b)**

The PPI-M for goods mainly produced for export stood at 150.4 in July, 150.0 in August and 154.6 in September, that is an increase of 8.8% and 3.0% in July and September respectively and a slight decline of 0.3% in August. The index of the sub group of « Manufacturing of food products n.e.c» recorded an increase of 5.7%, 1.3% and 3.1% in July, August and September respectively; of which coffee exports registered an increase of 4.1%, 0.7% and 1.0% in July, August and in September respectively. On the other hand, export price index of tea grew by 6.3%, 2.0% and 6.0% in July, August and September respectively. On annual basis, the index stood at 154.6 in September 2007, that is an increase of 1.5% when compared to 152.3 registered in September 2006. The poor quality of Kenyan tea due to drought in 2006 made the price of Rwandan tea increase at the international market. In 2007, the production of tea increased significantly in Rwanda, as a result the price of tea declined on annual basis by 23.7%, 2.7% and 7.8% in July, August and September respectively.

## **II. Analysis of trends- Quarterly Change**

### **2.1 PPI-M Local sales**

Compared to the previous quarter, the index of the third quarter increased by 0.7%. On annual basis, the PPI-M for local sold products went up by 4.8% as it rose from 121.2 in the third quarter of year 2006 to reach 127.6 in the third quarter of the year 2007.

### **2.2 PPI-M Exports**

The index for manufacturing exports which stood at 139.2 in the second quarter was 151.6 in the third quarter of the year 2007, which is an increase of 9.1%. Compared to the same quarter of the previous year, the quarterly change was 3.5% lower. This decrease is due to the price decline for tea by 17.3% but which was offset by 6.3% and 117.8% increase in coffee and pyrethrum prices respectively. The pyrethrum prices went up tremendously because of the improvement of the quality of pyrethrum products.

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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  $I_c$  = Index for current month

$W_i$  = 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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