



## NATIONAL INSTITUTE OF STATISTCS OF RWANDA

NATIONAL BANK OF RWANDA

## 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

Activity group	Weight 2010					2011	2010	2011	
, 8 <b>F</b>		Jul.	Aug.	Sept.	Jul.	Aug.	Sept.	3°Qrt	3°Qrt
DDI for Mainly Local Cold muchants	1000		C						
PPI for Mainly Local Sold products % change, previous month/quarter <sup>(*)</sup>	1000	163.19	162.81	162.92	172.28	172.27	173.90	162.97	172.82
% change, previous monin/quarter % change, 12 months		-0.05 5.36	-0.23 6.31	0.07 6.40	2.14 5.57	-0.01 5.81	0.95 6.74	-0.21 0.00	2.96 6.04
		3.30	0.31	0.40	3.37	3.81	0.74	0.00	0.04
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 <sup>(*)</sup>		0.07	-0.43	0.01	7.76	-0.02	-0.63	-0.32	8.69
% change, 12 months		6.53	8.81	8.88	9.46	9.92	9.21	0.00	9.53
Food products (*)	129	181.32	178.82	178.90	190.48	190.37	186.38	179.68	189.07
% change, previous month/quarter <sup>(*)</sup>		0.23	-1.38	0.04	0.04	-0.06	-2.09	-1.02	2.69
% change, 12 months		-4.11	1.89	2.08	5.05	6.45	4.18	0.00	5.23
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	0	169.52	169.52	169.52	175.01	175.01	175.01	169.52	175.01
Manufacture of dairy products	8	168.53	168.53	168.53	175.21	175.21	175.21	168.53	175.21
* *	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	150.99	151 41	182.62	192 10	192 10	150.07	182.27
<b>A</b>	27	150.61	150.88	151.41	182.02	182.10	182.10	150.97	162.27
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 <sup>(*)</sup>		0.00	0.00	0.00	11.49	0.00	0.00	0.00	11.49
% change, 12 months									
/ · ··································		12.25	12.27	12.27	11.49	11.49	11.49	0.00	11.49
		12.25	12.27	12.27	11.49	11.49	11.49	0.00	11.49
Manufacture of beer, soft drinks and tobacco	327	12.25 156.29	12.27 139.20	<b>12.27</b> 143.99	<b>11.49</b> 156.29	<b>11.49</b> 156.29	<i>11.49</i> 156.29	<b>0.00</b> 146.49	<b>11.49</b> 156.29
Manufacture of beer, soft drinks and	327								
Manufacture of beer, soft drinks and tobacco Other than Food, Beverages and Tobacco	327 <b>544</b>								
Manufacture of beer, soft drinks and tobacco Other than Food, Beverages and Tobacco % change, previous month/quarter <sup>(*)</sup>		156.29	139.20	143.99	156.29	156.29	156.29	146.49	156.29
Manufacture of beer, soft drinks and tobacco Other than Food, Beverages and Tobacco		156.29 163.01	139.20 <b>153.90</b>	143.99 <b>154.00</b>	156.29 166.37	156.29 <b>169.09</b>	156.29 <b>169.14</b>	146.49 156.97	156.29 <b>168.20</b>
Manufacture of beer, soft drinks and tobacco Other than Food, Beverages and Tobacco % change, previous month/quarter <sup>(*)</sup> % change, 12 months Manufacture of textiles, wearing apparel,		156.29 163.01 -0.16	139.20 <b>153.90</b> -5.59	143.99 154.00 0.07	156.29 166.37 -2.67	156.29 <b>169.09</b> <i>1.64</i>	156.29 169.14 0.03	146.49 156.97 -3.81	156.29 168.20 -1.59
Manufacture of beer, soft drinks and tobacco Other than Food, Beverages and Tobacco % change, previous month/quarter <sup>(*)</sup> % change, 12 months		156.29 163.01 -0.16	139.20 <b>153.90</b> -5.59	143.99 154.00 0.07	156.29 166.37 -2.67	156.29 <b>169.09</b> <i>1.64</i>	156.29 169.14 0.03	146.49 156.97 -3.81	156.29 168.20 -1.59
Manufacture of beer, soft drinks and tobacco Other than Food, Beverages and Tobacco % change, previous month/quarter <sup>(*)</sup> % change, 12 months Manufacture of textiles, wearing apparel, tanning and dressing of leather	544	156.29 163.01 -0.16 4.39	139.20 <b>153.90</b> -5.59 -1.47	143.99 154.00 0.07 -1.40	156.29 166.37 -2.67 2.06	156.29 169.09 1.64 9.87	156.29 169.14 0.03 9.83	146.49 156.97 -3.81 -3.70	156.29 <b>168.20</b> -1.59 7.15
Manufacture of beer, soft drinks and tobacco         Other than Food, Beverages and Tobacco         % change, previous month/quarter <sup>(*)</sup> % change, 12 months         Manufacture of textiles, wearing apparel, tanning and dressing of leather         Manufacture of paper and paper products,	<b>544</b> 47	156.29 163.01 -0.16 4.39 147.23	139.20 <b>153.90</b> -5.59 -1.47 146.22	143.99 <b>154.00</b> <b>0.07</b> <b>-1.40</b> 146.16	156.29 166.37 -2.67 2.06 175.12	156.29 169.09 1.64 9.87 174.37	156.29 169.14 0.03 9.83 174.95	146.49 <b>156.97</b> -3.81 -3.70 146.54	156.29 <b>168.20</b> -1.59 7.15 174.81
Manufacture of beer, soft drinks and tobacco         Other than Food, Beverages and Tobacco         % change, previous month/quarter(*)         % change, 12 months         Manufacture of textiles, wearing apparel, tanning and dressing of leather         Manufacture of paper and paper products, publishing of books, newspapers	<b>544</b> 47 40	156.29 <b>163.01</b> <b>-0.16</b> <b>4.39</b> 147.23 144.22	139.20 <b>153.90</b> -5.59 -1.47 146.22 120.09	143.99 <b>154.00</b> <b>0.07</b> <b>-1.40</b> 146.16 121.57	156.29 <b>166.37</b> <b>-2.67</b> <b>2.06</b> 175.12 145.01	156.29 169.09 1.64 9.87 174.37 147.33	156.29 <b>169.14</b> <b>0.03</b> <b>9.83</b> 174.95 147.33	146.49 <b>156.97</b> -3.81 -3.70 146.54 128.63	156.29 <b>168.20</b> -1.59 7.15 174.81 146.55
Manufacture of beer, soft drinks and tobacco         Other than Food, Beverages and Tobacco         % change, previous month/quarter <sup>(*)</sup> % change, 12 months         Manufacture of textiles, wearing apparel, tanning and dressing of leather         Manufacture of paper and paper products,	<b>544</b> 47	156.29 163.01 -0.16 4.39 147.23	139.20 <b>153.90</b> -5.59 -1.47 146.22	143.99 <b>154.00</b> <b>0.07</b> <b>-1.40</b> 146.16	156.29 166.37 -2.67 2.06 175.12	156.29 169.09 1.64 9.87 174.37	156.29 169.14 0.03 9.83 174.95	146.49 <b>156.97</b> -3.81 -3.70 146.54	156.29 <b>168.20</b> -1.59 7.15 174.81
Manufacture of beer, soft drinks and tobacco         Other than Food, Beverages and Tobacco         % change, previous month/quarter <sup>(*)</sup> % change, 12 months         Manufacture of textiles, wearing apparel, tanning and dressing of leather         Manufacture of paper and paper products, publishing of books, newspapers         Manufacture of chemical products	<b>544</b> 47 40	156.29 <b>163.01</b> <b>-0.16</b> <b>4.39</b> 147.23 144.22	139.20 <b>153.90</b> -5.59 -1.47 146.22 120.09	143.99 <b>154.00</b> <b>0.07</b> <b>-1.40</b> 146.16 121.57	156.29 <b>166.37</b> <b>-2.67</b> <b>2.06</b> 175.12 145.01	156.29 <b>169.09</b> <b>1.64</b> <b>9.87</b> 174.37 147.33	156.29 <b>169.14</b> <b>0.03</b> <b>9.83</b> 174.95 147.33	146.49 <b>156.97</b> -3.81 -3.70 146.54 128.63	156.29 <b>168.20</b> -1.59 7.15 174.81 146.55
Manufacture of beer, soft drinks and tobacco         Other than Food, Beverages and Tobacco         % change, previous month/quarter <sup>(*)</sup> % change, 12 months         Manufacture of textiles, wearing apparel, tanning and dressing of leather         Manufacture of paper and paper products, publishing of books, newspapers         Manufacture of chemical products         Manufacture of plastic products, tubes,	<b>544</b> 47 40 172	156.29 163.01 -0.16 4.39 147.23 144.22 148.57	139.20 <b>153.90</b> <b>-5.59</b> <b>-1.47</b> 146.22 120.09 136.53	143.99 <b>154.00</b> <b>0.07</b> <b>-1.40</b> 146.16 121.57 136.53	156.29 <b>166.37</b> <b>-2.67</b> <b>2.06</b> 175.12 145.01 149.47	156.29 169.09 1.64 9.87 174.37 147.33 157.73	156.29 169.14 0.03 9.83 174.95 147.33 157.73	146.49 <b>156.97</b> -3.81 -3.70 146.54 128.63 140.54	156.29 <b>168.20</b> <b>-1.59</b> <b>7.15</b> 174.81 146.55 154.97
Manufacture of beer, soft drinks and tobacco         Other than Food, Beverages and Tobacco         % change, previous month/quarter(*)         % change, previous month/quarter(*)         % change, 12 months         Manufacture of textiles, wearing apparel, tanning and dressing of leather         Manufacture of paper and paper products, publishing of books, newspapers         Manufacture of chemical products         Manufacture of plastic products, tubes, retreading and rebuilding of rubber tyres	<b>544</b> 47 40	156.29 <b>163.01</b> <b>-0.16</b> <b>4.39</b> 147.23 144.22	139.20 <b>153.90</b> -5.59 -1.47 146.22 120.09	143.99 <b>154.00</b> <b>0.07</b> <b>-1.40</b> 146.16 121.57	156.29 <b>166.37</b> <b>-2.67</b> <b>2.06</b> 175.12 145.01	156.29 <b>169.09</b> <b>1.64</b> <b>9.87</b> 174.37 147.33	156.29 <b>169.14</b> <b>0.03</b> <b>9.83</b> 174.95 147.33	146.49 <b>156.97</b> -3.81 -3.70 146.54 128.63	156.29 <b>168.20</b> -1.59 7.15 174.81 146.55
Manufacture of beer, soft drinks and tobacco         Other than Food, Beverages and Tobacco         % change, previous month/quarter <sup>(*)</sup> % change, previous month/quarter <sup>(*)</sup> % change, 12 months         Manufacture of textiles, wearing apparel, tanning and dressing of leather         Manufacture of paper and paper products, publishing of books, newspapers         Manufacture of chemical products         Manufacture of plastic products, tubes, retreading and rebuilding of rubber tyres         Manufacture of ceramic products, cement,	544           47           40           172           45	156.29 <b>163.01</b> <b>-0.16</b> <b>4.39</b> 147.23 144.22 148.57 151.32	139.20 <b>153.90</b> <b>-5.59</b> <b>-1.47</b> 146.22 120.09 136.53 151.32	143.99 <b>154.00</b> <b>0.07</b> <b>-1.40</b> 146.16 121.57 136.53 151.32	156.29 <b>166.37</b> <b>-2.67</b> <b>2.06</b> 175.12 145.01 149.47 151.32	156.29 <b>169.09</b> <b>1.64</b> <b>9.87</b> 174.37 147.33 157.73 151.32	156.29 <b>169.14</b> <b>0.03</b> <b>9.83</b> 174.95 147.33 157.73 151.32	146.49 <b>156.97</b> -3.81 -3.70 146.54 128.63 140.54 151.32	156.29         168.20         -1.59         7.15         174.81         146.55         154.97         151.32
Manufacture of beer, soft drinks and tobacco         Other than Food, Beverages and Tobacco         % change, previous month/quarter <sup>(*)</sup> % change, previous month/quarter <sup>(*)</sup> % change, 12 months         Manufacture of textiles, wearing apparel, tanning and dressing of leather         Manufacture of paper and paper products, publishing of books, newspapers         Manufacture of chemical products         Manufacture of plastic products, tubes, retreading and rebuilding of rubber tyres         Manufacture of ceramic products, cement, lime and articles of concrete	544           47           40           172           45           126	156.29 <b>163.01</b> <b>-0.16</b> <b>4.39</b> 147.23 144.22 148.57 151.32 195.98	139.20 <b>153.90</b> <b>-5.59</b> <b>-1.47</b> 146.22 120.09 136.53 151.32 182.52	143.99 <b>154.00</b> <b>0.07</b> <b>-1.40</b> 146.16 121.57 136.53 151.32 182.52	156.29           166.37           -2.67           2.06           175.12           145.01           149.47           151.32           196.08	156.29           169.09           1.64           9.87           174.37           147.33           157.73           151.32           196.08	156.29           169.14           0.03           9.83           174.95           147.33           157.73           151.32           196.08	146.49 <b>156.97</b> -3.81 -3.70 146.54 128.63 140.54 151.32 187.01	156.29           168.20           -1.59           7.15           174.81           146.55           154.97           151.32           196.08
Manufacture of beer, soft drinks and tobacco         Other than Food, Beverages and Tobacco         % change, previous month/quarter <sup>(*)</sup> % change, previous month/quarter <sup>(*)</sup> % change, 12 months         Manufacture of textiles, wearing apparel, tanning and dressing of leather         Manufacture of paper and paper products, publishing of books, newspapers         Manufacture of chemical products         Manufacture of plastic products, tubes, retreading and rebuilding of rubber tyres         Manufacture of ceramic products, cement,	544           47           40           172           45	156.29 <b>163.01</b> <b>-0.16</b> <b>4.39</b> 147.23 144.22 148.57 151.32	139.20 <b>153.90</b> <b>-5.59</b> <b>-1.47</b> 146.22 120.09 136.53 151.32	143.99 <b>154.00</b> <b>0.07</b> <b>-1.40</b> 146.16 121.57 136.53 151.32	156.29 <b>166.37</b> <b>-2.67</b> <b>2.06</b> 175.12 145.01 149.47 151.32	156.29 <b>169.09</b> <b>1.64</b> <b>9.87</b> 174.37 147.33 157.73 151.32	156.29 <b>169.14</b> <b>0.03</b> <b>9.83</b> 174.95 147.33 157.73 151.32	146.49 <b>156.97</b> -3.81 -3.70 146.54 128.63 140.54 151.32	156.29 168.20 -1.59 7.15 174.81 146.55 154.97 151.32

(Base Period: Fourth Quarter 2003 = 100)

## (\*) Only for quarterly figures

Source: Quarterly Producer Price Index Survey

# Table 1b: Monthly Producer Price Indices by activity group: Third Quarter 2011Goods produced mainly for export

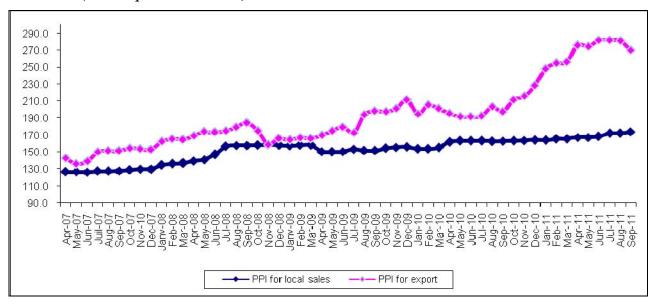
Activity group	Weight	2010			2011			2010	2011
	_	Jul.	Aug.	Sept.	Jul.	Aug.	Sept.	3eQrt	3ºQrt
PPI for Mainly Export Products	1000	192.49	203.53	197.28	281.89	280.72	270.00	197.77	277.54
% change, previous month/quarter <sup>(*)</sup>		0.45	5.74	-3.07	0.00	-0.42	-3.82	2.59	0.06
% change, 12 months		3.05	5.02	-0.36	46.45	37.93	36.86	2.54	40.34
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 <sup>(*)</sup>		0.48	5.75	-3.22	0.00	-0.43	-3.97	2.53	0.06
% change, 12 months		2.11	4.90	-0.73	47.52	38.90	37.82	2.07	41.34
Production of tea	585	148.59	162.92	160.77	179.32	186.68	167.47	157.43	177.82
% change, previous month/quarter <sup>(*)</sup>		-0.62	9.65	-1.32	1.73	4.11	-10.29	2.76	3.33
% change, 12 months		-4.81	-1.55	-4.26	20.68	14.58	4.17	-3.52	12.95
Production of coffee	392	246.13	251.64	238.92	422.57	408.60	409.95	245.56	413.71
% change, previous month/quarter <sup>(*)</sup>		1.48	2.24	-5.05	-1.07	-3.31	0.33	2.32	-1.93
% change, 12 months		9.26	11.98	3.10	71.69	62.38	71.58	8.06	68.47
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 <sup>(*)</sup>		0.00	5.54	0.00	-0.02	0.00	0.00	3.69	-0.02
% change, 12 months		27.31	7.49	7.43	24.36	17.84	17.84	13.13	19.93
Production of pyrethrum	22	401.41	423.63	423.63	499.18	499.18	499.18	416.22	499.18

(Base Period: Fourth Quarter 2003 = 100)

## (\*) 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<sup>th</sup> 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 (table1b)

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: 4<sup>th</sup> 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) 788 893 288, E-mail: oscar.sibomana@statistics.gov.rw **NBR**: Department of Statistics : Senior Officer «Economic statistics », KAJIGIJA Eugène Tel: (250) 788 417 427, E-mail : ekajigija@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 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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