

# Quarterly Export Price Index (EPI)

3<sup>rd</sup> Quarter 2002

(Base Year 1997=100)

## 1. Introduction

This issue of the Economic and Social Indicators presents quarterly Export Price Indices for the third quarter of 2002 and for the years 2000 and 2001.

The Export Price Index (EPI) provides an overall measure of pure price changes (in Mauritian rupees) of domestically produced goods exported to other countries. The base and reference period for the EPI is the calendar year 1997. More details on the construction of the EPI are given in the technical note annexed.

Table 1 presents quarterly indices by Standard International Trade Classification (SITC Rev 3). Percentage changes for each quarter compared to the previous quarter are shown in table 2 and percentage changes over corresponding quarters, in table 3.

## 2. Structure of the EPI

The EPI covers three sections of the SITC, namely "Food and live animals", "Manufactured goods classified chiefly by material" and "Miscellaneous manufactured articles". Goods falling under these sections covered 84% of the total exports in the base year. Distribution of weights for the different sections, groups of commodities and items are given in table 1. In addition to the overall index, separate sub-indices are also given for different product categories.

## 3. Quarterly changes (3<sup>rd</sup> quarter 2002)

During the third quarter of 2002, the EPI rose by 5.5 points (or 4.6%) and reached 125.7, from 120.2 in the second quarter. Export prices of goods classified in "Miscellaneous manufactured articles", which carries about 63% of the total weight, rose by 4.2%. Prices of products falling under "Food and live animals" increased by 6.5% while those of "Manufactured goods classified chiefly by material" went down by 0.7%.

When compared to price levels in the corresponding quarter of 2001, the index for the third quarter shows an overall increase of 11.6%. Prices of "Food and live animals" and "Miscellaneous manufactured articles" went up by 6.8% and 14.8% respectively. However, the price of "Manufactured goods classified chiefly by material" showed a decrease of 1.8%.

### 3.1 Sub-indices by section and commodity

#### Food and live animals

During the third quarter of 2002, the sub-index for "Food and live animals", which carries 32% of the total weight, moved from 105.9 to 112.8, or an increase of 6.5%, being mainly the result of an 8.2% increase in the export price of sugar.

The index for this section went up by 6.8%, when compared to the third quarter of 2001. This can again be explained by the 8.2% rise in the export price of raw sugar which constitutes 86% of this section.

#### Manufactured goods classified chiefly by materials

Export prices of goods in this section, which consist mainly of textile fabrics, decreased by 0.7%, the index falling from 116.3 in the second quarter of 2002 to 115.5 in the third quarter. The export prices of "Other textile fabrics" went up by 5.5% whereas those of "Cotton fabrics" decreased by 4.6%.

Compared to the third quarter of 2001, the index showed a decline of 1.8% mainly as a result of a 10.9% decrease in the price of "Cotton fabrics".

#### Miscellaneous manufactured articles

This is the most important section of the index as it carries about 63% of the total weight. It consists exclusively of articles of wearing apparel from the Export Processing Zone (EPZ).

The index for this section increased by 4.2%, going up from 127.7 in the second quarter of 2002 to 133.0 in the third quarter. Export prices of "Articles of apparel and clothing accessories", accounting for 97% of the weight of this section, increased by 4.2% and those of "Optical goods, watches and clocks" went up by 2.7%.

With respect to the third quarter of 2001, the index showed an increase of 14.8%, due to a rise of 15.2% in prices of "Articles of apparel and clothing accessories", and another of 2.3% in the prices of "Optical goods, watches and clocks".

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## **Technical Note**

### **Export Price Index (EPI)**

#### **Methodology for the Construction of the EPI**

##### **Definition**

The Export Price Index (EPI) is a measure of price change of domestically produced Mauritian products shipped to other countries, i.e it excludes re-exports. In addition to the overall index, separate sub-indices are also calculated for different product categories at more detailed level.

The first series of EPI was calculated with the year 1993 as base and reference period. The index was subsequently revised with 1997 as base year and new weights calculated on exports during that year.

##### **Comparison with Unit Value Index**

The Unit Value Export Index provides only a proxy measure for price changes of exported goods. It is derived from value and quantity data of products or groups of products obtained from trade returns and is thus highly dependent on the degree of homogeneity of the groups of products considered. On the other hand, the EPI measures pure price changes and is based on actual price measurements of relatively more homogeneous group of products. It requires elaborate specifications of products and takes into account all the main price determining factors such as country of destination, quality, mode of transport and mode of payment.

##### **Scope and Classification**

The EPI covers all domestic exports, the most important commodities being sugar and textile fabrics and articles of apparel and clothing accessories produced by the EPZ sector.

The index is based on the Nomenclature of the Standard International Trade Classification of the United Nations (SITC Rev 3). Separate sub-indices are produced for each SITC section and for more detailed groups where possible.

##### **Selection of Items and Firms**

A representative sample of 43 firms has been selected from trade declarations submitted to the Customs and Excise Department in 1997. The sample was drawn from exporting firms on the basis of regularity of their trade and their volume of exports. A total of 100 items (Entry Level Items, ELI's) which represent 35 product groups are priced from the selected enterprises.

##### **Weighting Scheme**

The weights are derived from the 1997 domestic exports. Weights assigned to each section and group are based on their export values in 1997. Each product or group of products selected for pricing purposes represents all products that fall within that weight group.

##### **Base and Reference Period**

The base price as well as the reference period for the EPI is calendar year 1997. Bench mark data for the year 1997, based on trade returns, have been used to derive weights. The selected firms have supplied prices of selected commodities for each of the 12 months in 1997. The yearly average price of each product has then been worked out and is used as base price for that product.

##### **Price Collection**

Prices are collected directly from co-operating export firms. As far as possible price quotations are reported on a free on board (F.O.B.) basis and are mostly contract prices. Each reporting firm is visited once every quarter but prices are supplied on a monthly basis and are averaged for each quarter.

##### **Sugar and Molasses**

Due to their specificity, sugar and molasses have been treated differently. Sugar and molasses produced during a crop year, which normally extends between July and June of the following year, are usually exported during that same crop year. Export prices of these commodities, sugar in particular, are mostly negotiated prices. These prices can be quite volatile between quarters depending on the destination of the shipments. Therefore, in order to eliminate these price distortions between quarters, the same average yearly price for the crop year is used for the four quarters comprising that crop year. The base price of these commodities for the year 1997 is the average price for crops years 1996/97 and 1997/98.

### **Calculation of the EPI**

A modified Laspeyres formula based on the weighted average of price relatives is used to calculate the EPI: the mathematical form of the formula is shown below:

$$I_{ot} = \frac{\sum W_i \times \frac{P_{it}}{P_{i0}} \times 100}{\sum W_i}$$

Where  $I_{ot}$  is the index for period t compared to base period 0

$w_i$  is the weight of the  $i^{th}$  element

$P_{i0}$  is the base price of the  $i^{th}$  element

$P_{it}$  is the price of the  $i^{th}$  element in period t

$\frac{P_{it}}{P_{i0}}$  is the price relative of the  $i^{th}$  element in period t relative to base period 0

$\Sigma$  means summation over all selected elements

### **Uses**

The primary use of the EPI is to deflate export trade statistics. It provides quarterly measures of price trends of Mauritian products sold abroad and can be used for calculating changes in the volume of exports.

It can also serve as a basis to assess the competitiveness of Mauritian products in relation to price trends of common products of other countries with which Mauritius competes for markets.

**Table 1: Quarterly Export Price Index by SITC 1, 2000-2002 (base:1997=100)**

SITC Section	Description	Weight	2000	2001					2002		
			Yearly Average	1st Qr	2nd Qr	3rd Qr	4th Qr	Yearly Average	1st Qr	2nd Qr	3rd Qr <sup>2</sup>
<b>0</b>	<b>Food and live animals</b>	<b>3,234</b>	<b>97.8</b>	<b>94.7</b>	<b>95.2</b>	<b>105.6</b>	<b>105.9</b>	<b>100.4</b>	<b>105.8</b>	<b>105.9</b>	<b>112.8</b>
	Meat and meat preparations	82	95.6	97.1	101.9	105.0	108.2	103.0	107.1	108.8	105.1
	Fish and fish preparations	325	62.1	66.2	69.6	71.8	73.9	70.4	73.1	74.3	71.8
	Sugar	2,789	102.2	97.6	97.6	108.3	108.3	103.0	108.3	108.3	117.2
	Molasses	38	88.4	119.2	119.2	194.9	194.9	157.1	194.9	194.9	158.9
<b>6</b>	<b>Manufactured goods classified chiefly by material</b>	<b>426</b>	<b>94.8</b>	<b>109.7</b>	<b>113.4</b>	<b>117.6</b>	<b>120.7</b>	<b>115.3</b>	<b>111.5</b>	<b>116.3</b>	<b>115.5</b>
	Textile yarn, fabrics, made-up articles, n.e.s & related products	426	94.8	109.7	113.4	117.6	120.7	115.3	111.5	116.3	115.5
	<i>Cotton fabrics</i>	281	92.5	109.6	114.3	117.9	120.4	115.6	109.0	110.0	105.0
	<i>Other textile fabrics</i>	145	99.3	110.0	111.6	116.9	121.2	114.9	116.3	128.6	135.7
<b>8</b>	<b>Miscellaneous manufactured articles</b>	<b>6,340</b>	<b>109.6</b>	<b>114.7</b>	<b>113.2</b>	<b>115.9</b>	<b>118.9</b>	<b>115.7</b>	<b>124.0</b>	<b>127.7</b>	<b>133.0</b>
	Articles of apparel and clothing accessories	6,159	109.1	113.9	112.4	115.0	118.1	114.8	123.4	127.1	132.5
	<i>Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted</i>	1,849	109.4	113.0	110.2	116.9	120.0	115.0	120.7	123.0	127.7
	<i>Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted</i>	474	124.9	133.8	137.2	133.2	135.8	135.0	146.7	147.0	145.0
	<i>Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crocheted</i>	302	121.6	125.0	122.5	123.7	125.3	124.1	118.6	117.8	120.5
	<i>Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crocheted</i>	59	132.6	141.4	144.7	148.8	152.3	146.8	162.8	162.5	158.3
	<i>Articles of apparel of textile fabrics whether</i>	3,475	105.2	110.2	108.7	110.2	113.5	110.6	121.4	126.8	133.9

	<i>or not knitted or crocheted, n.e.s</i>										
	Optical goods, n.e.s; watches & clocks	181	124.9	143.2	142.0	147.2	147.7	145.0	145.5	146.7	150.6
	<b>Overall</b>	<b>10,000</b>	<b>105.1</b>	<b>108.1</b>	<b>107.4</b>	<b>112.6</b>	<b>114.8</b>	<b>110.7</b>	<b>117.6</b>	<b>120.2</b>	<b>125.7</b>

<sup>1</sup> The Standard International Trade Classification Revision 3 (SITC Rev 3) | 2 Provisional

Table 2: Percentage change from previous period by SITC1, 2000-2002 (base:1997=100)

SITC Section	Description	Weight	2000	2001					2002		
			Yearly average	1st Qr	2nd Qr	3rd Qr	4th Qr	Yearly average	1st Qr	2nd Qr	3rd Qr 2
<b>0</b>	<b>Food and live animals</b>	<b>3,234</b>	<b>-5.9</b>	<b>0.4</b>	<b>0.5</b>	<b>10.9</b>	<b>0.3</b>	<b>2.6</b>	<b>-0.1</b>	<b>0.1</b>	<b>6.5</b>
	Meat and meat preparations	82	-9.9	0.0	4.9	3.0	3.0	7.8	-1.0	1.6	-3.4
	Fish and fish preparations	325	-11.5	7.8	5.1	3.2	2.9	13.4	-1.0	1.6	-3.4
	Sugar	2,789	-5.8	0.0	0.0	11.0	0.0	0.8	0.0	0.0	8.2
	Molasses	38	46.8	-5.5	0.0	63.5	0.0	77.6	0.0	0.0	-18.5
<b>6</b>	<b>Manufactured goods classified chiefly by material</b>	<b>426</b>	<b>-10.3</b>	<b>10.7</b>	<b>3.4</b>	<b>3.7</b>	<b>2.6</b>	<b>21.7</b>	<b>-7.6</b>	<b>4.3</b>	<b>-0.7</b>
	Textile yarn, fabrics, made-up articles, n.e.s & related products	426	-10.3	10.7	3.4	3.7	2.6	21.7	-7.6	4.3	-0.7
	<i>Cotton fabrics</i>	<i>281</i>	<i>-8.8</i>	<i>10.3</i>	<i>4.3</i>	<i>3.1</i>	<i>2.1</i>	<i>24.9</i>	<i>-9.4</i>	<i>0.9</i>	<i>-4.6</i>
	<i>Other textile fabrics</i>	<i>145</i>	<i>-12.7</i>	<i>11.8</i>	<i>1.5</i>	<i>4.7</i>	<i>3.7</i>	<i>15.8</i>	<i>-4.0</i>	<i>10.5</i>	<i>5.5</i>
<b>8</b>	<b>Miscellaneous manufactured articles</b>	<b>6,340</b>	<b>-3.5</b>	<b>5.1</b>	<b>-1.3</b>	<b>2.4</b>	<b>2.6</b>	<b>5.6</b>	<b>4.3</b>	<b>3.0</b>	<b>4.2</b>
	Articles of apparel and clothing accessories	6,159	-3.4	4.9	-1.3	2.3	2.7	5.3	4.5	3.0	4.2
	<i>Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted</i>	<i>1,849</i>	<i>-6.1</i>	<i>6.7</i>	<i>-2.5</i>	<i>6.1</i>	<i>2.6</i>	<i>5.1</i>	<i>0.6</i>	<i>1.9</i>	<i>3.8</i>
	<i>Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted</i>	<i>474</i>	<i>21.4</i>	<i>2.6</i>	<i>2.5</i>	<i>-2.9</i>	<i>1.9</i>	<i>8.1</i>	<i>8.0</i>	<i>0.2</i>	<i>-1.4</i>
	<i>Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crocheted</i>	<i>302</i>	<i>1.7</i>	<i>2.0</i>	<i>-2.0</i>	<i>1.0</i>	<i>1.3</i>	<i>2.1</i>	<i>-5.4</i>	<i>-0.7</i>	<i>2.3</i>
	<i>Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crocheted</i>	<i>59</i>	<i>6.3</i>	<i>2.3</i>	<i>2.3</i>	<i>2.8</i>	<i>2.3</i>	<i>10.7</i>	<i>6.9</i>	<i>-0.2</i>	<i>-2.6</i>
	Articles of apparel of textile fabrics whether or not knitted or crocheted	3,475	-5.7	4.7	-1.4	1.4	2.9	5.2	7.0	4.4	5.6
	Optical goods, n.e.s	181	-8.1	11.6	-0.8	3.6	0.4	16.2	-1.5	0.8	2.7
	<b>Overall</b>	<b>10,000</b>	<b>-4.5</b>	<b>4.0</b>	<b>-0.6</b>	<b>4.8</b>	<b>2.0</b>	<b>5.3</b>	<b>2.4</b>	<b>2.2</b>	<b>4.6</b>





**Table 3: Percentage change from corresponding period by SITC1, 2000-2002 (base:1997=100)**

SITC Section	Description	Weight	2000	2001					2002		
			Yearly average	1st Qr	2nd Qr	3rd Qr	4th Qr	Yearly average	1st Qr	2nd Qr	3rd Qr <sup>2</sup>
<b>0</b>	<b>Food and live animals</b>	<b>3,234</b>	<b>-5.9</b>	<b>-7.2</b>	<b>-4.9</b>	<b>17.2</b>	<b>18.2</b>	<b>2.6</b>	<b>11.7</b>	<b>11.2</b>	<b>6.8</b>
	Meat and meat preparations	82	-9.9	-1.9	6.8	15.3	11.4	7.8	10.3	6.8	0.1
	Fish and fish preparations	325	-11.5	9.1	18.8	6.2	20.3	13.4	10.5	6.8	0.0
	Sugar	2,789	-5.8	-9.3	-7.8	17.5	17.5	0.8	11.0	11.0	8.2
	Molasses	38	46.8	118.3	154.2	54.6	54.6	77.6	63.5	63.5	-18.5
<b>6</b>	<b>Manufactured goods classified chiefly by material</b>	<b>426</b>	<b>-10.3</b>	<b>17.2</b>	<b>22.5</b>	<b>25.2</b>	<b>21.8</b>	<b>21.7</b>	<b>1.6</b>	<b>2.6</b>	<b>-1.8</b>
	Textile yarn, fabrics, made-up articles, n.e.s & related products	426	-10.3	17.2	22.5	25.2	21.8	21.7	1.6	2.6	-1.8
	<i>Cotton fabrics</i>	281	-8.8	23.0	28.3	27.6	21.1	24.9	-0.5	-3.8	-10.9
	<i>Other textile fabrics</i>	145	-12.7	7.4	12.2	20.8	23.2	15.8	5.8	15.2	16.1
<b>8</b>	<b>Miscellaneous manufactured articles</b>	<b>6,340</b>	<b>-3.5</b>	<b>2.0</b>	<b>4.0</b>	<b>7.3</b>	<b>9.0</b>	<b>5.6</b>	<b>8.1</b>	<b>12.8</b>	<b>14.8</b>
	Articles of apparel and clothing accessories	6,159	-3.4	1.8	3.8	7.0	8.7	5.3	8.3	13.1	15.2
	<i>Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted</i>	1,849	-6.1	-1.1	0.4	8.5	13.3	5.1	6.8	11.6	9.2
	<i>Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted</i>	474	21.4	10.2	11.7	6.6	4.1	8.1	9.6	7.1	8.8
	<i>Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crocheted</i>	302	1.7	0.9	1.4	3.9	2.3	2.1	-5.1	-3.8	-2.6
	<i>Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crocheted</i>	59	6.3	9.5	10.9	12.2	10.2	10.7	15.1	12.3	6.4
	Articles of apparel of textile fabrics whether or not knitted or crocheted	3,475	-5.7	2.1	4.5	6.5	7.7	5.2	10.2	16.7	21.5
	Optical goods, n.e.s	181	-8.1	22.3	12.1	15.6	15.1	16.2	1.6	3.3	2.3
	<b>Overall</b>	<b>10,000</b>	<b>-4.5</b>	<b>-0.1</b>	<b>2.0</b>	<b>10.8</b>	<b>12.1</b>	<b>5.3</b>	<b>8.8</b>	<b>11.9</b>	<b>11.6</b>



Table 4: Quarterly Export Price Index by SITC, Year 1997 (base:1997=100)

SITC <sup>1</sup> Section	Description	Weight	1997				
			1st Qr	2nd Qr	3rd Qr	4th Qr	Yearly Average
<b>0</b>	<b>Food and live animals</b>	<b>3,234</b>	<b>100.6</b>	<b>100.5</b>	<b>98.9</b>	<b>100.1</b>	<b>100.0</b>
	Meat and meat preparations	82	94.4	97.8	100.5	107.2	100.0
	Fish and fish preparations	325	88.9	90.3	105.2	115.7	100.0
	Sugar	2,789	101.3	101.3	98.7	98.7	100.0
	Molasses	38	161.6	134.1	52.2	52.2	100.0
<b>6</b>	<b>Manufactured goods classified chiefly by material</b>	<b>426</b>	<b>97.1</b>	<b>98.4</b>	<b>100.9</b>	<b>103.7</b>	<b>100.0</b>
	Textile yarn, fabrics, made-up articles, n.e.s & related products	426	97.1	98.4	100.9	103.7	100.0
	<i>Cotton fabrics</i>	<i>281</i>	<i>97.1</i>	<i>97.3</i>	<i>101.8</i>	<i>103.7</i>	<i>100.0</i>
	<i>Other textile fabrics</i>	<i>145</i>	<i>97.0</i>	<i>100.4</i>	<i>99.0</i>	<i>103.5</i>	<i>100.0</i>
<b>8</b>	<b>Miscellaneous manufactured articles</b>	<b>6,340</b>	<b>98.3</b>	<b>97.4</b>	<b>100.6</b>	<b>103.8</b>	<b>100.0</b>
	Articles of apparel and clothing accessories	6,159	98.2	97.4	100.7	103.8	100.0
	<i>Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted</i>	<i>1,849</i>	<i>97.7</i>	<i>97.2</i>	<i>100.8</i>	<i>104.4</i>	<i>100.0</i>
	<i>Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted</i>	<i>474</i>	<i>95.8</i>	<i>93.1</i>	<i>104.3</i>	<i>106.9</i>	<i>100.0</i>
	<i>Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crocheted</i>	<i>302</i>	<i>95.4</i>	<i>96.8</i>	<i>102.3</i>	<i>105.6</i>	<i>100.0</i>
	<i>Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crocheted</i>	<i>59</i>	<i>100.5</i>	<i>95.9</i>	<i>101.0</i>	<i>102.5</i>	<i>100.0</i>
	<i>Articles of apparel of textile fabrics whether or not knitted or crocheted</i>	<i>3,475</i>	<i>99.0</i>	<i>98.1</i>	<i>100.0</i>	<i>102.9</i>	<i>100.0</i>
	Optical goods, n.e.s, watches and clocks	181	101.1	97.3	98.0	103.5	100.0
	<b>Overall</b>	<b>10,000</b>	<b>99.0</b>	<b>98.4</b>	<b>100.1</b>	<b>102.6</b>	<b>100.0</b>

<sup>1</sup> The Standard International Trade Classification Revision 3 (SITC Rev 3) | 2 Provisional