# Quarterly Export Price Index (EPI) 3rd Quarter 2004

## TABLE OF CONTENTS:

Introduction

Table 1 - Quarterly Export Price Index by SITC1, 2003 - 2004 (Reference year: 2003 = 100)

Table 1 (cont'd) - Quarterly Export Price Index by SITC1, 2003 - 2004 (Reference year: 2003 = 100)

Table 2 - Percentage change from previous period by SITC1, 1st Qr 2003 - 3rd Qr 2004 (Reference year: 2003 = 100)

Table 2 (cont'd) - Percentage change from previous period by SITC1, 1st Qr 2003 - 3rd Qr 2004 (Reference year: 2003=100)

Table 3 - Percentage change from corresponding period by SITC1, 1st Qr 2003 - 3rd Qr 2004 (Reference year: 2003 = 100)

Table 3 (cont'd) - Percentage change from corresponding period by SITC1, 1st Qr 2003 - 3rd Qr 2004 (Reference year: 2003 = 100)

Table 4 - Quarterly Export Price Index (EPI), 1998 - 2004

**Technical Note** 

# Quarterly Export Price Index (EPI) 3<sup>rd</sup> Quarter 2004 (Reference year: 2003=100)

#### 1. Introduction

This issue of the Economic and Social Indicators presents quarterly Export Price Indices for the third quarter of 2004 and for the year 2003.

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 weights used for the compilation of the index have been derived from domestic exports for 2002 while the year 2003 is used as reference year (i.e. 2003=100). A technical note on the construction of the EPI is annexed.

Table 1 presents quarterly indices by Standard International Trade Classification (SITC Rev 3). Percentage changes compared to previous quarters are shown in Table 2 while changes over corresponding quarters of the previous year are presented in Table 3.

#### 2. Structure of the EPI

The EPI covers five sections of the SITC, namely "Food and live animals", "Crude materials, inedible, except fuels", "Chemicals and related products", "Manufactured goods classified chiefly by material" and "Miscellaneous manufactured articles". Exports of goods falling under these sections covered 99% of domestic exports in reference year 2003. 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 2004)

During the third quarter of 2004, the EPI increased by 2.7 points to reach 109.2, from 106.5 in the second quarter. Increases were, in fact, registered in export prices of goods falling under all sections. The index for "Miscellaneous manufactured articles", which carries about 67% of the total weight, increased by 1.7% and that of "Food and live animals", with 29% of the total weight, rose by 4.6%.

Compared to price levels in the corresponding quarter of 2003, the index showed an overall increase of 6.8%. This can be explained mainly by the fact that prices of "Miscellaneous manufactured articles" went up by 8.6% and those of "Food and live animals" by 3.9%.

## 3.1 Sub-indices by section and commodity

#### Food and live animals

During the third quarter of 2004, the sub-index for "Food and live animals", which carries 29% of the total weight, moved from 102.9 to 107.6, representing an increase of 4.6%. This is attributed mostly to a rise of 4.2% in the price of sugar which represents 78% of the total weight for this section.

When compared to the third quarter of 2003, the index for this section went up by 3.9%, mainly as a result of a 4.2% jump in the export price of sugar.

# Crude materials, inedible, except fuels

The index for this section moved from 83.6 in the second quarter to 88.6 in the third quarter, being the outcome of a 6% rise in the export price of fresh cut flowers. However, the index showed a decline of 13.8% when compared to the third quarter of 2003.

### Chemicals and related products

A rise of 4% in the export price of fertilisers in the third quarter of 2004 has caused the sub-index for "Chemicals and related products" to move from 126.1 to 131.1. Compared to the corresponding quarter of 2003, the index registered an increase of 27.3%.

#### Manufactured goods classified chiefly by material

Export prices of goods in this section, which consists mainly of textile fabrics, went up by 1.4%, the index moving from 97.7 in the second quarter of 2004 to 99.1 in the third quarter. The export prices of "Textile yarn and fabrics", the major component of this section, showed an increase of 0.6%.

Compared to the third quarter of 2003, the index decreased by 2.7%, as a result of a fall of 4.2% in prices of "Textile yarn and fabrics".

### Miscellaneous manufactured articles

This is the most important section of the index as it carries about 67% of the total weight. It consists mostly of articles of wearing apparel from the Export Processing Zone (EPZ).

The index for this section increased by 1.7%, going up from 108.5 in the second quarter of 2004 to 110.3 in the third quarter. Export prices of "Articles of apparel and clothing accessories", accounting for 98% of the weight for this section, rose by 1.7% and those of "Optical goods, watches and clocks" by 1.2%.

Compared to the third quarter of 2003, the index rose by 8.6% following increases of 8.5% in prices of "Articles of apparel and clothing accessories", and 15.7% in "Optical goods, watches and clocks".

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Table 1 - Quarterly Export Price Index by SITC<sup>1</sup>, 2003 - 2004 (Reference year:2003=100)

SITC <sup>1</sup>			2003	2003 <sup>2</sup>					2004	
Section	Description	Weight	Average	1st Qr	2nd Qr	3rd Qr	4th Qr	1st Qr <sup>2</sup>	2nd Qr <sup>2</sup>	3rd Qr <sup>3</sup>
0	Food and live animals	2,942	100.0	96.9	96.6	103.6	102.9	101.5	102.9	107.6
	Fish and fish preparations	521	100.0	100.7	98.4	102.6	98.2	89.4	96.1	100.3
	Cereals and cereal preparations	55	100.0	95.5	98.8	99.9	105.8	127.1	129.8	133.2
	Sugar	2,296	100.0	95.9	95.9	104.1	104.1	104.1	104.1	108.5
	Molasses	15	100.0	120.5	120.5	79.5	79.5	79.5	79.5	146.8
	Feeding stuff for animals	55	100.0	98.6	99.0	102.8	99.4	90.6	94.9	100.1
2	Crude materials, inedible, except fuels	31	100.0	95.6	98.8	102.8	102.8	83.9	83.6	88.6
	Crude animal and vegetable materials	31	100.0	95.6	98.8	102.8	102.8	83.9	83.6	88.6
5	Chemicals and related products	21	100.0	94.2	98.7	103.0	104.1	120.9	126.1	131.1
	Fertilisers	21	100.0	94.2	98.7	103.0	104.1	120.9	126.1	131.1
6	Manufactured goods classified chiefly by material	293	100.0	99.4	99.2	101.9	99.6	94.2	97.7	99.1
	Paper, paperboard and articles of paper pulp, of paper or of paperboard	24	100.0	96.6	98.5	103.2	101.7	94.1	99.3	103.0
	Textile yarn, fabrics, made-up articles, n.e.s & related products	226	100.0	100.1	99.1	101.9	99.0	94.2	97.0	97.6
	Non-metallic mineral manufactures	43	100.0	97.5	99.9	100.9	101.8	94.0	100.9	104.9

<sup>&</sup>lt;sup>1</sup> The Standard International Trade Classification Revision 3 (SITC Rev 3)

- 4 -

<sup>&</sup>lt;sup>2</sup> Revised

<sup>&</sup>lt;sup>3</sup> Provisional

Table 1 (cont'd) - Quarterly Export Price Index by SITC<sup>1</sup>, 2003 - 2004 (Reference year:2003=100)

SITC1			2003	2003 <sup>2</sup>				2004		
Section	Description	Weight	Average	1st Qr	2nd Qr	3rd Qr	4th Qr	1st Qr <sup>2</sup>	2nd Qr <sup>2</sup>	3rd Qr <sup>3</sup>
8	Miscellaneous manufactured articles	6,713	100.0	98.1	98.7	101.6	101.6	103.1	108.5	110.3
	Articles of apparel and clothing accessories	6,589	100.0	98.1	98.7	101.7	101.5	102.9	108.5	110.3
	Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted	1,772	100.0	98.7	98.3	101.7	101.1	102.8	107.3	110.0
	Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted	1,125	100.0	99.8	99.7	100.2	100.2	89.7	99.5	101.9
	Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crochetted	286	100.0	98.9	98.3	102.3	100.5	110.7	116.4	119.5
	Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crochetted	172	100.0	97.9	97.8	102.9	101.4	93.9	99.4	102.5
	Articles of apparel, of textile fabrics, whether or not knitted or crocheted	3,209	100.0	97.0	98.7	102.0	102.3	107.5	112.1	112.9
	Clothing accessories, of textile fabrics, whether or not knitted or crocheted	25	100.0	94.2	98.7	103.0	104.1	101.6	104.7	108.8
	Optical goods,n.e.s, watches and clocks	124	100.0	98.9	98.9	98.8	103.5	110.7	113.0	114.3
	Optical goods	38	100.0	99.3	99.3	99.3	102.2	96.3	100.8	102.4
	Watches and clocks	86	100.0	98.7	98.8	98.6	104.0	117.0	118.4	119.6
	Overall	10,000	100.0	97.8	98.1	102.2	101.9	102.4	106.5	109.2

<sup>&</sup>lt;sup>1</sup> The Standard International Trade Classification Revision 3 (SITC Rev 3)

- 5 -

<sup>&</sup>lt;sup>2</sup> Revised

<sup>&</sup>lt;sup>3</sup> Provisional

- 6 -

Table 2 - Percentage change from previous period by SITC<sup>1</sup>, 1st Qr 2003 - 3rd Qr 2004 (Reference year:2003=100)

SITC <sup>1</sup>			Percentage Changes (%) from					
Section	Description	Weight	1st Qr 03 to 2nd Qr 03	2nd Qr 03 to 3rd Qr 03	3rd Qr 03 to 4th Qr 03	4th Qr 03 to 1st Qr 04	1st Qr 04 to 2nd Qr 04	2nd Qr 04 to 3rd Qr 04
0	Food and live animals	2,942	-0.3	7.2	-0.7	-1.4	1.4	4.6
	Fish and fish preparations	521	-2.3	4.3	-4.3	-9.0	7.5	4.4
	Cereals and cereal preparations	55	3.5	1.1	5.9	20.1	2.1	2.6
	Sugar	2,296	0.0	8.6	0.0	0.0	0.0	4.2
	Molasses	15	0.0	-34.0	0.0	0.0	0.0	84.7
	Feeding stuff for animals	55	0.4	3.8	-3.3	-8.9	4.7	5.5
2	Crude materials, inedible, except fuels	31	3.3	4.0	0.0	-18.4	-0.4	6.0
	Crude animal and vegetable materials	31	3.3	4.0	0.0	-18.4	-0.4	6.0
5	Chemicals and related products	21	4.8	4.4	1.1	16.1	4.3	4.0
	Fertilisers	21	4.8	4.4	1.1	16.1	4.3	4.0
6	Manufactured goods classified chiefly by material	293	-0.2	2.7	-2.3	-5.4	3.7	1.4
	Paper, paperboard and articles of paper pulp, of paper or of paperboard	24	2.0	4.8	-1.5	-7.5	5.5	3.7
	Textile yarn, fabrics, made-up articles, n.e.s & related products	226	-1.0	2.8	-2.8	-4.8	3.0	0.6
	Non-metallic mineral manufactures	43	2.5	1.0	0.9	-7.7	7.3	4.0

<sup>&</sup>lt;sup>1</sup> The Standard International Trade Classification Revision 3 (SITC Rev 3)

Table 2 (cont'd) - Percentage change from previous period by SITC<sup>1</sup>, 1st Qr 2003 - 3rd Qr 2004 (Reference year:2003=100)

SITC1				m				
Section	Description	Weight	1st Qr 03 to 2nd Qr 03	2nd Qr 03 to 3rd Qr 03	3rd Qr 03 to 4th Qr 03	4th Qr 03 to 1st Qr 04	1st Qr 04 to 2nd Qr 04	2nd Qr 04 to 3rd Qr 04
8	Miscellaneous manufactured articles	6,713	0.6	2.9	0.0	1.5	5.2	1.7
	Articles of apparel and clothing accessories	6,589	0.6	3.0	-0.2	1.4	5.4	1.7
	Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted	1,772	-0.4	3.5	-0.6	1.7	4.4	2.5
	Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted	1,125	-0.1	0.5	0.0	-10.5	10.9	2.4
	Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crochetted	286	-0.6	4.1	-1.8	10.1	5.1	2.7
	Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crochetted	172	-0.1	5.2	-1.5	-7.4	5.9	3.1
	Articles of apparel, of textile fabrics, whether or not knitted or crocheted	3,209	1.8	3.3	0.3	5.1	4.3	0.7
	Clothing accessories, of textile fabrics, whether or not knitted or crocheted	25	4.8	4.4	1.1	-2.4	3.1	3.9
	Optical goods,n.e.s, watches and clocks	124	0.0	-0.1	4.8	7.0	2.1	1.2
	Optical goods	38	0.0	0.0	2.9	-5.8	4.7	1.6
	Watches and clocks	86	0.1	-0.2	5.5	12.5	1.2	1.0
	Overall	10,000	0.3	4.2	-0.3	0.5	4.0	2.5

<sup>&</sup>lt;sup>1</sup> The Standard International Trade Classification Revision 3 (SITC Rev 3)

Table 3 - Percentage change from corresponding period by SITC<sup>1</sup>, 1st Qr 2003 - 3rd Qr 2004 (Reference year:2003=100)

SITC <sup>1</sup>			Percentage Changes (%) from					
Section	Description	Weight	1st Qr 03 to 1st Qr 04	2nd Qr 03 to 2nd Qr 04	3rd Qr 03 to 3rd Qr 04			
0	Food and live animals	2,942	4.7	6.5	3.9			
	Fish and fish preparations	521	-11.2	-2.3	-2.2			
	Cereals and cereal preparations	55	33.1	31.4	33.3			
	Sugar	2,296	8.6	8.6	4.2			
	Molasses	15	-34.0	-34.0	84.7			
	Feeding stuff for animals	55	-8.1	-4.1	-2.6			
2	Crude materials, inedible, except fuels	31	-12.2	-15.4	-13.8			
	Crude animal and vegetable materials	31	-12.2	-15.4	-13.8			
5	Chemicals and related products	21	28.3	27.8	27.3			
	Fertilisers	21	28.3	27.8	27.3			
6	Manufactured goods classified chiefly by material	293	-5.2	-1.5	-2.7			
	Paper, paperboard and articles of paper pulp, of paper or of paperboard	24	-2.6	0.8	-0.2			
	Textile yarn, fabrics, made-up articles, n.e.s & related products	226	-5.9	-2.1	-4.2			
	Non-metallic mineral manufactures	43	-3.6	1.0	4.0			

<sup>&</sup>lt;sup>1</sup> The Standard International Trade Classification Revision 3 (SITC Rev 3)

Table 3 (cont'd) - Percentage change from corresponding period by SITC<sup>1</sup>, 1st Qr 2003 - 3rd Qr 2004 (Reference year:2003=100)

SITC1			Percen	tage Changes (%	) from
Section	Description	Weight	1st Qr 03 to 1st Qr 04	2nd Qr 03 to 2nd Qr 04	3rd Qr 03 to 3rd Qr 04
8	Miscellaneous manufactured articles	6,713	5.1	9.9	8.6
	Articles of apparel and clothing accessories	6,589	4.9	9.9	8.5
	Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted	1,772	4.2	9.2	8.2
	Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, not knitted or crocheted	1,125	-10.1	-0.2	1.7
	Men's or boys' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crochetted	286	11.9	18.4	16.8
	Women's or girls' coats, jackets, suits, blazers, trousers, shorts, shirts etc, knitted or crochetted	172	-4.1	1.6	-0.4
	Articles of apparel, of textile fabrics, whether or not knitted or crocheted	3,209	10.8	13.6	10.7
	Clothing accessories, of textile fabrics, whether or not knitted or crocheted	25	7.9	6.1	5.6
	Optical goods,n.e.s, watches and clocks	124	11.9	14.3	15.7
	Optical goods	38	-3.0	1.5	3.1
	Watches and clocks	86	18.5	19.8	21.3
	Overall	10,000	4.7	8.6	6.8

<sup>&</sup>lt;sup>1</sup> The Standard International Trade Classification Revision 3 (SITC Rev 3)

Table 4 - Quarterly Export Price Index (EPI), 1998 - 2004

	Base year 1997 = 100							
	Qr 1	102.1						
	Qr 2	106.1						
1998	Qr 3	111.3						
	Qr 4	113.8						
	Year	108.3						
	Qr 1	111.0						
	Qr 2	110.0						
1999	Qr 3	109.7						
	Qr 4	109.7						
	Year	110.1						
	Qr 1	108.2						
	Qr 2	105.3						
2000	Qr 3	101.6						
	Qr 4	102.4						
	Year	104.4						
	Qr 1	108.1						
	Qr 2	107.4						
2001	Qr 3	112.6						
	Qr 4	114.8						
	Year	110.7						
	Qr 1	117.6						
	Qr 2	120.2						
2002	Qr 3	126.5						
	Qr 4	126.8						
	Year	122.8						
	Qr 1	124.9						
	Qr 2	126.5						
2003	Qr 3	130.2						
	Qr 4	131.2						
	Year	128.2						
	Reference year 2003 = 100							
2004 <sup>1</sup>	Qr 1	102.4						
	Qr 2	106.5						
	Qr 3	109.2						

<sup>&</sup>lt;sup>1</sup> Provisional

## **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 first revised in 1997 and subsequently revised in 2003.

# **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 38 firms has been selected from trade declarations submitted to the Customs and Excise Department in 2002. The sample was drawn from exporting firms on the basis of regularity of their trade and their volume of exports. A total of 80 items (Entry Level Items, ELI's) which represent 36 products are priced from the selected enterprises.

# **Weighting Scheme**

The weights are derived from the 2002 domestic exports. Weights assigned to each section and group are based on their export values in 2002. 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 period for the EPI is calendar year 2002 and the reference period 2003. Bench mark data for the year 2002, 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 2003. 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 2003 is the average price for crops years 2002/03 and 2003/04.

## **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:

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

Where  $1_{ot}$  is the index for period t compared to base period 0

wi is the weight of the ith element

P<sub>io</sub> is the base price of the i<sup>th</sup> element

P<sub>it</sub> is the price of the i<sup>th</sup> element in period t

 $\frac{P_{it}}{P_{ot}}$  is the price relative of the i<sup>th</sup> 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.