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 a more detailed level.

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 account of 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, molasses, tea 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 42 firms has been selected from trade declarations submitted to the Customs and Excise Department in 1993. The sample was drawn from exporting firms on the basis of regularity of their trade and their volume of exports. A total of 119 items (Entry Level Items, ELI’s) which represent 32 product groups are priced from the selected enterprises.
Weighting Scheme

The weights are derived from the 1993 Domestic Exports. Weights assigned to each section and group are based on their export values in 1993. 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 1993. Bench mark data for the year 1993, 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 1993. 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 1993 is the average price for crops years 92/93 and 93/94.

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:
\[ I_{ot} = \frac{\sum wi.P_{it} \times 100}{\sum \frac{P_{io}}{P_{io}}} \]

Where

- \( I_{ot} \) is the index for period \( t \) compared to base period \( 0 \)
- \( w_i \) is the weight of the \( i^{th} \) element
- \( P_{io} \) is the base price of the \( i^{th} \) element
- \( P_{it} \) is the price of the \( i^{th} \) element in period \( t \)
- \( \frac{P_{it}}{P_{io}} \) is the price relative of the \( i^{th} \) element in period \( t \) relative to base period \( 0 \)
- \( \sum \) 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.