CONSTRUCTING AND USING INTERNATIONAL TRADE PRICES INDICES IN BARBADOS

by

Ryan Straughn
Research Department
Central Bank of Barbados
P.O. Box 1016
BRIDGETOWN

Presented at the 22nd Annual Review Seminar, Research Department
Central Bank of Barbados
July 24 – 27, 2001

Constructing and Using International Trade Prices Indices in Barbados

by

Ryan Straughn

Abstract:

Introduction

A central question in international economics is "how will trade affect the production of goods and services in the economy?"[1] This question leads immediately to the requirement that real or "inflation-adjusted" trade be measured. However, due to the variety and complexity of the goods and services involved in trading, it is not possible to measure the quantity of those goods and services in physical units. Instead, the quantities are approximated via deflation by dividing the aggregate export sales and import purchases by the export and import price indices, respectively. Subsequently, one can obtain a measure of real net exports (RNE) by subtracting the value of imports from the value of exports, after deflation to constant dollars. The current value of import flows ($R_{m,t}$) is deflated by the current import price index ($P_{m,t}$), and the current value of export flows ($R_{x,t}$) is deflated by the current export price index ($P_{x,t}$)

$$RNE_t = \frac{R_{x,t}}{P_{x,t}} - \frac{R_{m,t}}{P_{m,t}}$$

The primary reason then, for producing import and export price indices is to deflate (or adjust for inflation) the value of Barbados' foreign trade. Another use for such indices is

[1] Note that even if there is no change in aggregate production, trade can affect the mix of goods and services produced.

the production of a terms of trade index (the ratio of export price index and the import price index), which can be perceived as a measure of a country's industrial competitiveness, an issue of prime importance to Barbados in this global age.

The goal of the researcher then, is to produce valid price indices that track these price trends for *consistent* items over time. Thus, having reviewed the methodologies used by various countries in the construction of trade prices indices, the paper outlines firstly, the background framework that ideally should be used when constructing indices of such nature; secondly, the methodologies used in the construction of the indices; thirdly, some uses and limitations; and fourthly, some preliminary results are provided.

Background Framework

Constructing indices of this nature usually require an intense survey of the import-export sector of the country in question using a multistage design to select up-to-date specific import and export items that can be priced over time with the objective of providing an unbiased measure of price change in each published index. The first stage selects establishments independently within each broad product category (stratum); an establishment can be selected in more than one category. The second stage selects detailed product categories within each establishment/stratum pair and is designed to support all of the relevant classification systems. Each pair can be sampled multiple times, allowing for more quotes to be selected from detailed product categories with larger proportions of the stratum value traded by the establishment. Subsequent stages of subselection are conducted until a unique item that can be priced over time is achieved.

The first two stages should be completed at BSS using the appropriate sampling frame, and the final stages take place during the interview with the respondent.

The design however, is responsive to the constraints of both cost and respondent burden. Budget constraints determine the maximum number of establishments selected in a sample, and respondent burden limits[2] control the number of items priced by each establishment. In the U.S., the International Pricing Program (IPP) uses a probability sampling technique, commonly known as a systematic probability proportionate to size design, throughout the design process so as to allow items with larger shares of the detailed product category to have more weight in the indices and reduce the number of items for which the respondent needs to provide on a monthly basis.

In the absence of such a sample design in Barbados, the pursuit of different methodologies for the construction of these trade price indices was warranted. These methodologies are outlined in the following section.

Indices Methodologies

In this section, the methodologies for the construction of both the import price index and export price index are presented.

Import Price Index

The most important assumption made in the model is that the export price indices and export unit value indices of Barbados' major trading partners taken together with their associated trade weights adequately represents the percentages of imports to Barbados as well as an indication of the behaviour of the prices of imports. This is necessary, if the

[2] Burden limits are usually determined by the establishment's relative size, diversity, and consistency of trade in the stratum. These assignments, however, can be negotiated with the respondent.

index is to have any interpretational value. The rationale for this is that, these export indices of the trading partners shows the changes in the prices of exports, some of which Barbados imports. It is postulated that changes in import prices, are a reflection of the changes in these export prices since Barbados is a small open economy (SOE). The use of such an approach obviously limits both the *usefulness* and *interpretation* of the index, which at best can only be used as a *proxy*, since there would be no item classifications in the import price index.

Secondly, in weighting the trading partners, the export unit value index for ***industrial*** countries was used to represent the remaining countries in the *industrial* category, whilst the export value index for the ***Western Hemisphere***, (which includes Trinidad & Tobago and Venezuela, Barbados' major trading partners in this category) represents those countries in the ***developing*** category in the Western Hemisphere and the export value index for ***developing*** countries was used to represent the remaining countries in the category.

The import price index is of the Laspeyres type[3] (a weighted arithmetic average formula using fixed weights for the base period) and uses one aggregation methodology. Under this methodology, the trading partners are weighted within country (industrial and developing) categories. These relatives are combined across countries and then aggregated to form the index

[3] The use of the Laspeyres formula is assumed to be valid since the trading partners' indices are calculated using similar methodology. Here, the regimen weights are fixed at the base period of the index and do not vary until the index is reweighted or redeveloped. In order to have consistency of data, the same base year was chosen.

$$P_t = \frac{\Sigma_j \Sigma_i w_{jt} w_{it} \left(\frac{p_{it}}{p_{io}} \right)}{\Sigma_j \Sigma_i w_{jt} w_{it}}$$

where:

P_t is the estimated price index at period t.

w_{jt} is the weight at period t of country category j.

w_{it} is the weight at period t of country i within country category j.

p_{it}/p_{i0} is the price index relative of country i from period t to base period 0.

These weights are based on trade values compiled by the International Monetary Fund (IMF) in the Direction of Trade Statistics (DOTS) Yearbook 2000. The base year weights are derived from 1995 trade values. All the data were obtained from the International Financial Statistics (IFS) CD-ROM, December 2000 and June 2001 published by the IMF. The data used were the export price indices and export unit value indices of Barbados' trading partners. Note that *export unit values* serve as proxies for data on final product prices for traded goods but suffer from some of the same compositional drawbacks as wholesale prices. In addition, because of the less-than-complete homogeneity of the commodity classes upon which the unit values are calculated, the national series are often somewhat erratic. On the other hand, the unit value relatives (each computed as the ratio of one country's index to that of its competitors) tend to be much less variable than relatives derived from other price or cost indicators. This is because of the degree of competition that is characteristic of international trade and the resultant selectivity in the composition of a country's exports. International competition often places severe limits on how far an exporter's prices may diverge from those charged by competitors, so that goods not competitively priced tend too disappear from

the trade flows for which unit values are computed. Consequently, export unit values imperfectly reflect underlying cost developments[4].

Export Price Index[5]

The methodology explored for the construction of this index was significantly different from that for the import price index, but first the issue of *pricing* is dealt with.

In the US, most of the prices that are used to calculate price indices for the International Price Program are actual transaction prices in the foreign trade market. Respondents are asked to provide prices for actual transactions that occur as close as possible to the first day of the month. Other types of prices such as estimated or list prices may be accepted for calculation in the indices, but prices for actual transactions that occur at any time during the month are preferable to non-transaction prices. Estimated prices are estimates of the price that would have been charged for a transaction as close to the beginning of the month as possible. In general, average prices are not accepted in the IPP survey, with the exception of selected commodities that are priced using secondary source data.

As stated earlier, the goal of the exercise is to produce valid price indices that track the price trends over time. To do this, the IPP sends respondents a pricing form that contains all the current information about the item, including a detailed item description and the trade factors. Item descriptions indicate the physical characteristics of an item and can change over time. The trade factors associated with each item include the units priced, the country of origin/destination, the discount structure, the class of buyer or seller, and for imports, the duty amount when appropriate. Like the item description, the trade factors can vary and significantly affect the price. Any change in an item's description or the trade factors is reviewed to determine their significance.

Against this background, the Standard International Trade Classification System (SITC) Codes were carefully scrutinised to ensure that any changes in physical characteristics and the like, would not have a significant effect on the average price of the items over time. Note here, that item classification was pursued because of the obvious ease with which sampling of the export universe could be carried out.

The index is of the Laspeyres type and uses two aggregation methodologies. At the lowest level, items are weighted within detailed product categories. These relatives are combined across categories and then aggregated to lowest level stratum indices.

$$P_{ht} = \frac{\Sigma_j \Sigma_i w_{jt} w_{it} \left(\frac{p_{it}}{p_{i0}} \right)}{\Sigma_j \Sigma_i w_{jt} w_{it}}$$

where:

P_{ht} is the estimated price index at period t for the lowest level stratum h.

w_{jt} is the weight at period t of detailed product category j.

w_{it} is the weight at period t of item i within detailed product category j.

p_{it}/p_{i0} is the price index relative of item i from period t to base period 0.

The weights used for the lowest level stratum indices are based on the dollar values of the items for that particular time period; therefore, items are weighted within detailed product categories. Adding sampling weights at this level gives a more accurate measure of the actual price level than equally weighting.

[4] Note however, that unit value indices do take into account changes in a product's specifications when measuring price changes.

[5] The results from use of methodology similar to that for the construction of the import price index was explored and is presented in the Appendix.

At the next step, the lowest level stratum indices are aggregated to successive upper index levels.

$$P_{Ht} = \frac{\sum_h w_{ht} P_{ht}}{\sum_h w_{ht}}$$

where:

P_{Ht} is the price index at period t for upper level index H,

w_{ht} is the weight at period t of child[6] index h,

P_{ht} is the price index at period t for child index h.

The weights uses for the upper level indices are based on trade values compiled by the Barbados Statistical Service for the base year (1995).

Uses and Limitations

As mentioned above, the primary reason for producing import and export price indices is to deflate (or adjust for inflation) the value of Barbados' foreign trade. Deflating trade flows is a means of breaking down the change in value of import and export trade into changes in prices versus changes in quantity. The import and export price indices should be used to deflate the annual trade figures produced by the Barbados Statistical Service (BSS) as well as the quarterly National Income and Product Accounts. These adjustments are crucial to estimating the real output of the Barbados economy as well as real consumption and real investment. Import and export price indices have a number of additional uses, including measuring domestic inflation, studying long-term price trends, as inputs to forecasting future prices, as inputs into trade contracts and trade legislation, and in replacement cost accounting.

Foreign sector price statistics are also valuable when doing various elasticity studies. Price and income elasticities can be calculated in conjunction with one another in order to distinguish how much of trade volume changes are attributable to price effects and how much to income effects. Price elasticities measure how the quantity traded responds to price changes as measured by the import and export price indices. Income elasticities measure how trade responds to changes in the real value of national income.

Another use of import and export price indices is as an input to measuring U.S. industrial competitiveness. Different forms of economic competitiveness can be measured by calculating terms of trade indices, deriving export price comparison ratios, or calculating import and export foreign currency indices. Individual traders can look at the relevant import or export price index in their industry to compare how their price changes compare to average price changes.

One final use for import and export price indices is to analyse the effect of exchange rates on prices. Pass-through rates can be calculated using the price indices to measure how much of an exchange rate change is passed-through to either an import price or an export price.

Producing indices used primarily as deflators, however, affects the interpretation of the indices when used for other purposes. For example, import price movements can often be an indicator of future domestic inflation because many final goods and inputs to domestic production are imported. Because import price indices only measure the value of a product at a port (either domestic or foreign), special care must be taken when using these

[6] A child stratum is at one less level of aggregation than index H.

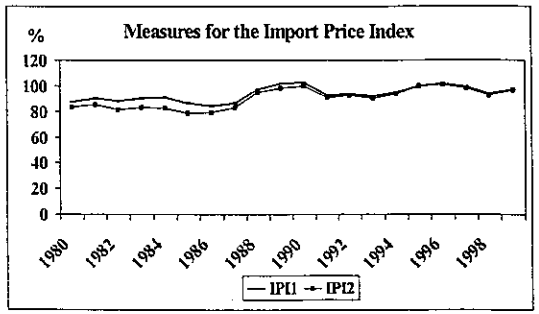
data to assess the effect of import prices on domestic inflation levels. First, the f.o.b. (free on board) foreign port series excludes international freight charges. Second, both an f.o.b. foreign port and a c.i.f. (cost, insurance, freight) U.S. port price series exclude duty as well as costs associated with domestic intermediaries (e.g., wholesalers and retailers). All of these factors may affect the final selling price. For purposes of deflating imports, however, duties are excluded from prices before the indices are calculated. This exclusion, therefore, affects any use of the indices to measure price changes that focuses on the entire transaction price, which would include any taxes levied.

Finally, import and export price indices are not seasonally adjusted. Consequently, price trends for commodities with seasonal patterns may require longer time spans for proper analysis.

Preliminary Results

The following tables and graphs show the results that were obtained using the various methodologies in the calculation of the international trade price indices for Barbados. Tables 1 and 2 show the import price index for Barbados calculated using export prices and export unit value indices, in the case of the former, and only export unit values indices, in the case of the latter for the period 1980 to 1999. Chart 1 shows the corresponding line graphs of the aggregated price indices from Tables 1 and 2. From the chart, it is clear that there is no significant difference between using either of the two measures. Table 3 shows the categorised indices of Barbados' domestic exports for the period 1980 to 1999. Note that Molasses and Shrimp are now subsumed into the category of *Other Food & Beverages*; and Sports Equipment in *Other Manufacturing*. Chart 2 shows the graph of the estimated export price index. See the Appendix for the results derived from using a similar methodological framework as that explored in the construction of the import price index.

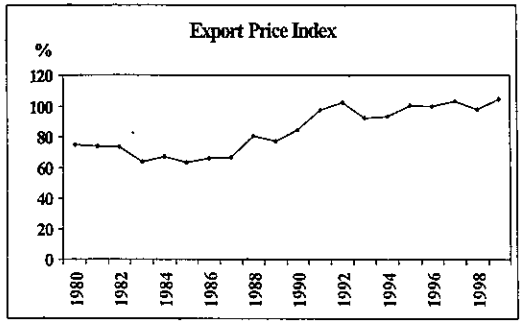
Chart 1



Overall Reliability

It is not possible to specify confidence levels for the calculated index, mainly because the sample is not random. Errors in measurement and sampling (which include the assumptions made about the data) are probably the major contributors to any uncertainty. The degree of accuracy of any price index varies depending on particular characteristics of the index chosen. The nature of the commodities being measured will be one factor affecting accuracy. Services are known to be particularly hard to quantify. Both the level and quality of output are often difficult to accurately identify and price. Furthermore, the

Chart 2



level of aggregation may affect quality, with indices at the finest level generally having more variability from sampling is smoothed out.

In general, the degree of accuracy of an index will vary depending upon the nature of the commodity group or industry being measured and the level with the hierarchy from which it is drawn. In most instances there is a trade-off to be made between choosing an index that relates specifically the area of interest (i.e. has a smaller scope) and the statistical accuracy of the index in terms of its variability, sample and non-sample error of the underlying data and other statistical properties.

Table 1. Import Price Index for Barbados
(Export prices and unit value indices)

Country	Canada	Japan*	UK*	US*	Industrial Countries	Western Hemisphere	Developing Countries	Total
Weights	5.10	6.81	9.55	40.97	10.34	22.91	4.32	100
1980	85.74	152.25	56.56	71.93	73.95	112.84	110.34	87.87
1981	88.87	154.04	61.63	78.55	71.06	108.57	116.86	90.35
1982	87.01	160.04	65.86	79.43	68.42	97.05	110.04	88.23
1983	86.91	150.47	70.53	80.27	66.1	108.19	102.2	90.33
1984	86.47	151.39	76.07	81.36	64.25	106.29	102.02	90.72
1985	82.67	149.21	80.12	80.74	63.98	91.14	95.68	86.73
1986	79.61	126.72	72.19	81.52	73.09	87.75	86.01	84.36
1987	84.85	120.33	74.73	82.93	81.59	89.71	92.7	86.63
1988	91.92	117.57	75.52	88.77	86.86	120.17	95.49	96.91
1989	97.85	122.71	78.89	91.09	87.07	129.89	102.15	101.37
1990	98.52	125.34	81.71	91.92	95.1	127.4	104.82	102.57
1991	96.79	118.57	82.84	92.75	94.18	87.14	98.29	92.87
1992	93.87	114.31	84.52	92.84	96.72	91.96	99.38	94.04
1993	92.02	105.17	94.98	93.24	87.27	87.1	96.39	92.27
1994	93.04	102.25	96.91	95.22	90.42	93.25	93.71	94.74
1995	100	100	100	100	100	100	100	100
1996	101.28	104.78	100.85	100.55	98.1	105.47	98.74	101.70
1997	99.28	106.73	95.22	99.02	91.23	104.73	94.62	99.51
1998	93.38	108.17	90.29	95.95	88.04	92.7	82.84	93.98
1999	95.19	97.23	89.83	94.72	89.07	109.48	87.05	96.91

Source: Research Department, Central Bank of Barbados
Notes:
1. The series named **Industrial Countries** is the export unit value index for Industrial Countries and is to represent the rest of the industrial countries not included in the table.
2. The series named **Western Hemisphere** is the export unit value index for Western Hemispheric countries and is to represent the countries in this category, particularly Trinidad & Tobago and Venezuela.
3. The series named **Developing Countries** is the export unit value index for Developing Countries and is to represent the rest of the industrial countries not include in the Western Hemisphere.
* indicates countries with export price indices.

Table 2. Import Price Index for Barbados
(Export unit value indices only)

Country	Canada	Japan	UK	US	Industrial Countries	Western Hemisphere	Developing Countries	Total
Weights	5.10	6.81	9.55	40.97	10.34	22.91	4.32	100
1980	85.74	51.71	83.5	71.93	73.95	112.84	110.34	83.60
1981	88.87	54.76	78.57	78.55	71.06	108.57	116.86	85.22
1982	87.01	51.03	72.95	79.43	68.42	97.05	110.04	81.48
1983	86.91	49.91	68.48	80.27	66.1	108.19	102.2	83.29
1984	86.47	49.83	64.82	81.36	64.25	106.29	102.02	82.73
1985	82.67	49.24	65.87	80.74	63.98	91.14	95.68	78.57
1986	79.61	58.99	67.81	81.52	73.09	87.75	86.01	79.33
1987	84.85	64.58	78.6	82.93	81.59	89.71	92.7	83.20
1988	91.92	70.16	85.89	88.77	86.86	120.17	95.49	94.67
1989	97.85	69.66	82.53	91.09	87.07	129.89	102.15	98.11
1990	98.52	69.07	92.83	91.92	95.1	127.4	104.82	99.80
1991	96.79	74.01	93.2	92.75	94.18	87.14	98.29	90.83
1992	93.87	78.72	94.42	92.84	96.72	91.96	99.38	92.56
1993	92.02	85.98	90.57	93.24	87.27	87.1	96.39	90.54
1994	93.04	92.65	94.16	95.22	90.42	93.25	93.71	93.82
1995	100	100	100	100	100	100	100	100
1996	101.28	92.53	99.85	100.55	98.1	105.47	98.74	100.77
1997	99.28	86.51	99.17	99.02	91.23	104.73	94.62	98.51
1998	93.38	80.53	95.18	95.95	88.04	92.7	82.84	92.57
1999	95.19	85.15	92.48	94.72	89.07	109.48	87.05	96.34

Source: Research Department, Central Bank of Barbados
Notes:
1. The series named **Industrial Countries** is the export unit value index for Industrial Countries and is to represent the rest of the industrial countries not included in the table.
2. The series named **Western Hemisphere** is the export unit value index for Western Hemispheric countries and is to represent the countries in this category, particularly Trinidad & Tobago and Venezuela.
3. The series named **Developing Countries** is the export unit value index for Developing Countries and is to represent the rest of the industrial countries not include in the Western Hemisphere.

Table 3. Export Price Index for Barbados
Composition of Domestic Exports

Period	Sugar	Rum	Margarine & Lard	Other Food & Beverages	Chemicals	Electrical Components	Clothing	Other Manufacturing	All Others	Total
	16.9	5.8	2.8	13.1	15.8	16.6	1.9	25.3	1.8	100
1980	67.2	38.5	96.0	27.1	82.6	83.4	213.6	87.8	90.5	74.61
1981	70.9	38.7	104.0	54.4	96.9	85.3	201.1	53.9	143.6	73.80
1982	57.0	46.7	59.8	38.7	98.5	76.1	249.4	71.2	175.2	73.19
1983	52.7	47.4	92.2	31.3	94.0	75.1	297.7	41.6	89.5	63.46
1984	54.9	53.0	101.9	40.3	93.0	70.5	239.6	54.1	95.0	66.85
1985	55.4	58.7	98.4	52.8	101.7	59.5	186.2	37.2	101.7	63.16
1986	46.1	60.7	98.4	31.6	102.1	77.9	173.8	53.3	106.0	65.97
1987	76.4	53.6	98.4	34.8	87.0	81.6	156.5	47.1	58.1	66.57
1988	79.7	66.9	96.3	26.7	87.7	74.5	302.8	91.5	97.2	80.40
1989	73.7	63.6	95.6	50.2	75.0	80.9	233.4	78.6	130.3	77.33
1990	86.9	73.6	94.7	73.6	74.9	76.2	220.0	88.9	98.0	84.16
1991	86.7	64.1	94.0	82.2	102.1	105.2	136.3	105.5	140.0	97.17
1992	93.7	59.0	104.7	101.6	90.8	112.8	79.3	118.3	112.6	102.03
1993	91.7	70.8	92.5	115.0	83.4	71.2	52.4	107.2	103.5	92.22
1994	86.8	72.3	86.3	107.1	98.9	92.5	66.4	93.4	90.5	92.79
1995	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.00
1996	96.3	83.8	122.7	124.9	93.0	89.2	57.9	103.5	104.2	99.60
1997	88.5	74.5	122.1	103.3	129.4	88.9	89.9	109.8	112.4	102.95
1998	86.2	97.0	104.4	98.0	94.2	89.9	102.5	111.2	123.3	98.06
1999	82.5	85.4	98.1	143.0	103.4	91.1	121.9	111.6	112.5	104.40

Source: Research Department, Central Bank of Barbados

Notes: Note that Molasses and Shrimp are now subsumed into the category of *Other Food & Beverages*; and Sports Equipment in *Other Manufacturing*.

Conclusion

From the outset, I stated that the methodologies used throughout this paper were not ideally suited for the measurement of international trade price indices. However, those outlined in this paper still hold according to *a priori* economic expectations. The empirical results seem not to suggest, whether there were sustained increases or decreases in the changes in the general price levels of the imports and exports of Barbados but more

of a fluctuation in both the changes in the prices of imports and export, especially in the second half of the sample period. Clearly, these projects are far from complete given that the relevant methodologies were not utilised. Therefore, it is suggested that until the relevant framework is put in place, where one can obtain actual transaction prices from the universe of importers/exporters (wholesalers/retailers) in Barbados, that these indices be used only as proxies and that careful interpretation be applied to any analysis using these indices.

Acknowledgements

I am indebted to Sheryl Peter for her invaluable contributions all the way through this project. I wish to thank Darrin Downes for his comments. I am acknowledging Riko Kaneko of the Bank of Japan for his assistance at the beginning of these projects.

References

References

1. Alterman, Bill, *"Are producer prices good proxies for export prices?"* Monthly Labour Review, Office of Prices and Living Conditions, Bureau of Labour Statistics, October 1997.
2. Bank of Japan, Research and Statistics Department, *"Explanation of the 1990 Base, Wholesale Price Indices"* January 1993.
3. Bank of Japan, Research and Statistics Department, *"Revision to 1995 base for Wholesale Price Indices (WPI)"* Friday, December12, 1997.
4. Rosensweig, Jeffrey A., *"Constructing and Using Exchange Rate Indices"*, Federal Reserve Bank of Atlanta *Economic Review*,
5. U.S. Census Bureau, Statistical Abstract of the United States, *Section 15 Prices*, 1999.
6. U.S. Department of Labour, Bureau of Labour Statistics, *BLS Handbook of Methods, Chapter 14. Producer Prices*, April 1997.
7. U.S. Department of Labour, Bureau of Labour Statistics, *BLS Handbook of Methods, Chapter 15. International Price Indices*, April 1997.
8. U.S. Department of Labour, Bureau of Labour Statistics, *BLS Handbook of Methods, Chapter 17. The Consumer Price Index*, April 1997.

Appendix

Similar methodology to that used in the construction of the import price index can be used to construct the export price index. Again *a priori* economic expectations can be applied to formulate such methodology. Barbados' economy is classified as a small open economy and is therefore a price-taker on the international market. Thus the prices at which goods are exported from Barbados are exogenously determined and hence the import prices of the major trading partners should adequately reflect the changes in export prices for Barbados. Like the import price index, this index is of the Laspeyres type and possesses the same properties, where the trade weights are based on trade values compiled by the International Monetary Fund (IMF) in the Direction of Trade Statistics (DOTS) Yearbook 2000. The results are shown below. Tables 1 and 2 show the export price index for Barbados calculated using the import prices and import unit value indices of the major trading partners, in the case of the former, and only export unit values indices, in the case of the latter for the period 1980 to 1999. Chart 1 shows the line graphs of the aggregated price indices from Tables 1 and 2. From the chart, it is clear that there is no significant difference between using either of the two measures.

Chart 1

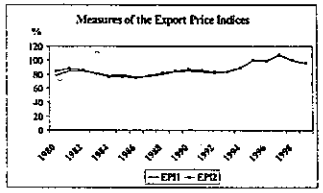


Table 1. Export Price Index for Barbados
(Import prices and unit value indices)

Country	Canada	UK*	US*	Industrial Countries	Western Hemisphere	Developing Countries	Total
Weights	5.47	18.91	17.41	5.47	51.74	1.00	100
1980	76.96	53.16	82.35	86.33	85.85	104.94	78.79
1981	85.69	57.8	86.89	86	93.31	108.54	84.81
1982	86.78	62.72	85.46	82.74	91.5	103.87	84.39
1983	86.4	68.32	81.94	79.27	85.22	102.57	81.37
1984	86.99	74.53	83.42	77.91	76.29	100.32	78.11
1985	85.13	78.2	81.33	76.7	78.28	97.02	79.27
1986	83.41	74.58	78.57	78.69	73.59	95.36	75.68
1987	86.25	76.83	84.26	86.42	72.67	97.71	77.22
1988	91.37	76.05	88.35	90.62	75.97	96.38	79.99
1989	95.25	79.33	91.04	91.86	80.94	103.7	84.00
1990	98.45	81.18	93.98	100.21	79.91	103.95	84.96
1991	98.86	82.18	93.98	98.54	77.18	100.07	83.63
1992	97.65	82.85	94.74	99.48	72.92	97.86	81.65
1993	96.48	91.18	94.06	88.42	76.44	96.88	84.25
1994	96.87	94.26	95.69	90.92	85.2	92.84	89.77
1995	100	100	100	100	100	100	100.00
1996	100.28	100.12	100.97	98.96	98.51	98.06	99.36
1997	99.39	93.78	98.53	92.67	117.85	95.88	107.33
1998	97.17	87.96	92.6	87.78	107.07	85.93	99.13
1999	97.41	86.8	93.36	87.87	100.16	83.33	95.46

Source: Research Department, Central Bank of Barbados
Notes:
1. The series named **Industrial Countries** is the import unit value index for Industrial Countries and is to represent the rest of the industrial countries not included in the table.
2. The series named **Western Hemisphere** is the import unit value index for Western Hemispheric countries and is to represent the countries in this category, particularly Trinidad & Tobago and Venezuela.
3. The series named **Developing Countries** is the import unit value index for Developing Countries and is to represent the rest of the industrial countries not include in the Western Hemisphere.
* indicates countries with import price indices.

Appendix

Table 2. Export Price Index for Barbados
(Import unit value indices)

Country	Canada	UK*	US*	Industrial Countries	Western Hemisphere	Developing Countries	Total
Weights	5.47	18.91	17.41	5.47	51.74	1.00	100
1980	76.96	80.85	82.35	86.33	85.85	104.94	84.02
1981	85.69	75.51	86.89	86	93.31	108.54	88.16
1982	86.78	70.84	85.46	82.74	91.5	103.87	85.93
1983	86.4	67.04	81.94	79.27	85.22	102.57	81.12
1984	86.99	63.8	83.42	77.91	76.29	100.32	76.08
1985	85.13	64.49	81.33	76.7	78.28	97.02	76.68
1986	83.41	70.22	78.57	78.69	73.59	95.36	74.85
1987	86.25	80.25	84.26	86.42	72.67	97.71	77.87
1988	91.37	86.68	88.35	90.62	75.97	96.38	82.00
1989	95.25	82.94	91.04	91.86	80.94	103.7	84.68
1990	98.45	92.15	93.98	100.21	79.91	103.95	87.04
1991	98.86	92.64	93.98	98.54	77.18	100.07	85.61
1992	97.65	92.97	94.74	99.48	72.92	97.86	83.57
1993	96.48	86.86	94.06	88.42	76.44	96.88	83.43
1994	96.87	91.55	95.69	90.92	85.2	92.84	89.25
1995	100	100	100	100	100	100	100.00
1996	100.28	98.86	100.97	98.96	98.51	98.06	99.12
1997	99.39	97.31	98.53	92.67	117.85	95.88	108.00
1998	97.17	92.45	92.6	87.78	107.07	85.93	99.98
1999	97.41	89.2	93.36	87.87	100.16	83.33	95.91

Source: Research Department, Central Bank of Barbados
Notes:
1. The series named **Industrial Countries** is the import unit value index for Industrial Countries and is to represent the rest of the industrial countries not included in the table.
2. The series named **Western Hemisphere** is the import unit value index for Western Hemispheric countries and is to represent the countries in this category, particularly Trinidad & Tobago and Venezuela.
3. The series named **Developing Countries** is the import unit value index for Developing Countries and is to represent the rest of the industrial countries not include in the Western Hemisphere.