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**UNDERSTANDING REAL EFFECTIVE EXCHANGE  
RATES: THE CASE OF BELIZE**

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# **UNDERSTANDING REAL EFFECTIVE EXCHANGE RATES THE CASE OF BELIZE**

## **I. Introduction**

The purposes of writing this paper are to bring about a greater understanding of Real Effective Exchange Rate (REER) by studying the IMF methodology, and to develop a worksheet for the continued monitoring of the index. Very little work has been done in the area here at the Central Bank. The only paper written on this topic at the Bank was "A Real Effective Exchange Rate Index for Belize" by Martin Brownbridge in 1988. The objective of his study at that time was to outline a suitable methodology for the calculation of a REER index for Belize, and to calculate the annual index for the recent years.

Brownbridge (1988) estimated separate indices for exports and imports, both deflated by the Consumer Price Index. The REER index for exports was weighted by commodity, while the import index was weighted by share of imports from trading partners. This paper is more interested in the overall effects of REER on the balance of payments and therefore makes no separation between imports and exports.

Renewed interest in this topic has been actuated by the fall in official development aid to the Caribbean region, and by concerns over external competitiveness in an increasingly globalized trading environment. Official development assistance (external grants and concessional loans) and preferential trading arrangements have aided in maintaining stable exchange rates in some of the countries in the region. Movements in the REER reflect changes in the competitiveness of internationally traded goods. While the REER is beyond the immediate control of policymakers, especially in a country operating a fixed exchange

rate, it signals the need for macroeconomic adjustment that would bring about internal and external balance, and real growth.

While the methodology used in deriving REER will be elaborated on later in this paper, it is important to give a simplified definition of REER in introducing the theoretical background. Assuming that there are only two countries in the world, say Belize and the United States, then Belize's REER can be expressed as the following equation:

$$\text{REER}_{\text{bz}} = E_{(\text{usd}/\text{bzd})} * P_{\text{bz}}/P_{\text{us}}$$

where  $E_{(\text{usd}/\text{bzd})}$  is the nominal exchange rate given as US dollars per Belize dollar,  $P_{\text{bz}}$  is the price deflator for Belize, and  $P_{\text{us}}$  is the US price deflator. In this case, if it takes more US dollars to buy one Belize dollar, the index increases signifying that the Belize dollar has appreciated. The index will also increase if domestic prices are rising faster than foreign prices.

A sharp appreciation of the REER signals balance of payments difficulties ahead as a result of the loss of overall cost and /or price competitiveness. An appreciation means that locally produced goods are relatively more expensive than imports, or that Belize's export prices have risen relative to those of its foreign competitors. This leads to a rise in imports and a fall in export earnings which, in effect, is a widening of the current account deficit on the balance of payments.

In a world of many countries and varied exchange rate regimes, calculation of the REER is a bit more complicated but the principles remain the same. Movement in the index represent an appreciation or depreciation of the domestic currency in real terms. Deriving the index becomes even more important given that foreign currencies do not rise or fall in unison vis-à-vis any single currency or commodity such as gold. REER provides a common framework within which current account movements could

be analyzed under varying exchange rate regimes (Helmert 1988). Even in the case where the Belize dollar is tied to the US dollar, policymakers would be interested in the competitiveness of the Belize dollar compared to other currencies over time. As with other Caribbean economies that have enjoyed preferential trade and official development assistance, there is the concern that the domestic currency is overvalued when these concessions are removed.

### **The Effects of an Overvalued Currency**

The REER gives some idea of the domestic currency's trend toward overvaluation. Killick (1993) outlined the effects of an overvalued currency as follows:

- a) It discourages exports by reducing profitability. An overvalued exchange rate will hold down the local currency proceeds of exports, which discourages production, particularly if inflation raises production costs.
- b) It discourages national production of importables because local currency costs of imports will be artificially low. It negatively affects agriculture and manufacturing, but these biases are typically reduced through import licensing and other forms of protection. It increases import demand, which raises the demand for foreign exchange. This leads policymakers to impose exchange controls.
- c) An overvalued currency skews the distribution of income from producers of tradables and in favor of services and other non-traded activities.
- d) It is liable to destabilize capital movements and is associated with an external debt problem as a larger current account deficit is financed through external borrowing.

No change in the REER does not necessarily mean that the domestic currency is market-valued as the base year could have been chosen at a time when the

domestic currency was already overvalued. By the same token, an appreciation of the index does not necessarily mean that the domestic currency is overvalued or that exports are not competitive. What is most important is that the trend be studied in the context of other macroeconomic developments.

## **II. Definitions**

**Nominal Exchange Rate:** or the Bilateral Exchange Rate, is the rate at which actual transactions take place.

**Nominal Effective Exchange Rate:** also known as the Multilateral Exchange Rate, is a measure of the value of a currency against a weighted average of several currencies, often expressed as an index of the change in the exchange rate relative to a base period. Where the foreign currency cost of a unit of domestic currency is measured, an increase in the index means an appreciation of the domestic currency.

**Real Effective Exchange Rate:** is equal to the nominal effective exchange rate deflated by relative price index or some other measure of competitiveness.

## **III. Methodology**

In compiling a real effective exchange rate index one has to keep in mind the objective of constructing such an index given the sensitivity of the index to the selection of currencies, the weights, and the deflator used. The primary objective in assessing changes in exchange rates is to assess its impact on the balance of payments, while other objectives may be more narrowly focused on the competitiveness of exports.

## **Choosing Currencies and Weights**

With the large number of national currencies, and the emergence of new ones every now and then, it is unnecessarily cumbersome to construct an index with all these currencies since a significant number of them are not used extensively in conducting international trade and transactions. It is therefore important to select those currencies which are important, either directly or indirectly, for the international trade of the home country (in this case Belize). One would expect therefore, that the index for Belize would have the US dollar, the Pound Sterling, and the Mexican Peso. Movements in these currencies impact directly on Belize's international trade.

The approach used by the IMF to select currencies is based on bilateral trade during the period 1988 to 1990. Each country is assigned a weight based on its share of total trade during that period as indicated in appendix A-1. The currencies of those countries with the more significant share are selected. The REER index developed through selection of weights based on share of total trade and is referred to as **bilateral trade-weighted** index. Some developed countries may be interested in constructing indexes based on trade in manufactured goods. The Federal Reserve of the United States publishes an **multilateral effective exchange rate index** on the basis of other countries' importance to global trade.

In comparing appendix A-1 with appendix B, it is noted that the IMF makes some adjustments to the bilateral trade weights. In recognition of the fact that Belize's exporters are in competition with countries who are not trading partners, IMF methodology includes countries who are major producers of those goods which we export. For exports therefore, both bilateral and also third-market competitiveness are

taken into consideration. This is why Brazil, a major producer of sugar and citrus, is included in the IMF weights although its trade with Belize is negligible. Lower prices for Brazilian citrus concentrates mean that Belize as a price taker would have to accept lower prices for its citrus concentrates on the world market.

IMF methodology also excludes trade in energy products (crude oil, refined petroleum natural gas, and electricity). The rationale given is that the focus is on international competitiveness of domestic factors of production excluding economic rent. The Fund argues that it is the changes in returns to the other factors which affect trade performance over the medium term.

### **Choice of Deflator**

There are a number of deflators used in the calculation of REER and there is no consensus as to which series to use as deflators. The most widely used ones are Consumer Prices, Export and Import Prices, and Unit Labor Costs. Other deflators include Wholesale Prices, GDP Deflator, Value Added, and Prices of Tradeable to Non-Tradeable products. The Consumer Price index is calculated by most countries and is therefore the most widely available deflator.

### **Methodology Used in Constructing the Worksheet**

The idea behind constructing the worksheet was to gain a better understanding of REER by studying IMF methodology, making a few modifications in the absence of some of the information, and comparing the results with the index published by IMF in the International Financial Statistics (IFS). The choice of a base year is 1990 as currently used by the IMF to compare changes in REER among countries over time. With regard to trading partners and weights, Taiwan and Brazil which are included in

the IMF methodology, were excluded. Information on exchange rate of the New Taiwan dollar and Taiwan's CPI are not widely published. In the case of Brazil, the rebasing of the exchange rate of the Reais to the US dollar during the 1990's and the magnitude of the changes in the CPI complicated the incorporation of that country as a partner. The weight for each partner was therefore redistributed among the other thirteen countries. The REER which the Fund estimates would be higher during that period of devaluation by Brazil. However, as prices in Brazil increase, there should be a gradual convergence of the indices.

The formula for estimating Belize's REER index is as follows:

$$REER_{bz} = (CPI_{bz} * ERI_{bz}) / \text{EXP} \sum_{i=1}^n (WT_{bzi} * \text{LN} (CPI_i * ERI_i)) * 100$$

where,

CPI = Consumer Price Index with 1990=100

ERI = the index of Arithmetic average of the monthly rate of exchange between the national currency and the US dollar with 1990=100

EXP = Anti-log

LN = Natural Log

bz = is the index for Belize as the Reporting Country

i = index for Belize's partner countries

n = number of partner countries, i=1,...,n

WT<sub>bzi</sub> = the weight Belize attached to each trading partner

Note that the above formula averages exchange rate using geometric means (log transformation). Geometric means give proportionate weights to appreciating currencies as they give to depreciating currencies, while arithmetic means give greater weight to appreciating currencies than they do to depreciating currencies. Implicit in the CPI is the Laspeyres price index where the cost of a fixed basket of goods bought in the current period is compared with the same basket in the base period.



#### **IV. Results and Conclusion**

The results are presented in table form in appendix A-5 and in graphical form in Chart 1. As expected, there was a diversion between IMF estimates and those derived from this exercise between the second quarter of 1993 and the second Quarter of 1994 as a result of devaluation in Brazil. Except for this period, the two series were close and moved in the same direction.

There was a downward trend in the REER between the first quarter of 1993 and the second quarter of 1994 from 101.8 to 93.6, influenced by an appreciation of major currencies, especially the Japanese Yen, against the US dollar. Since the second quarter of 1995, the general trend in the REER has been an appreciation of 9.6% to 102.0, coinciding with a weakening of the US dollar against the Japanese Yen. There was a slight fall in the index during the fourth quarter of 1996 resulting from an appreciation of the British Pound from US\$ 1.5622 to US\$ 1.6980. As the Yen weakened from 116.0 per US dollar to 124 during the first quarter of 1997, the REER rose by 1.5% to 102.

The question will invariably asked - is Belize exchange rate overvalued? This typically refers to the nominal exchange rate between the Belize dollar and the US dollar, but the same question can be asked regarding the REER. Belize's REER has remained within a  $\pm 10\%$  band of its 1990 level between the first quarters of 1993 and 1997. As a matter of fact, the index has remained below its 1990 level for most of the period in review.

REER should not be used in isolation in determining whether a currency is overvalued however. Fischer (1988) reminds us that overvaluation of the exchange

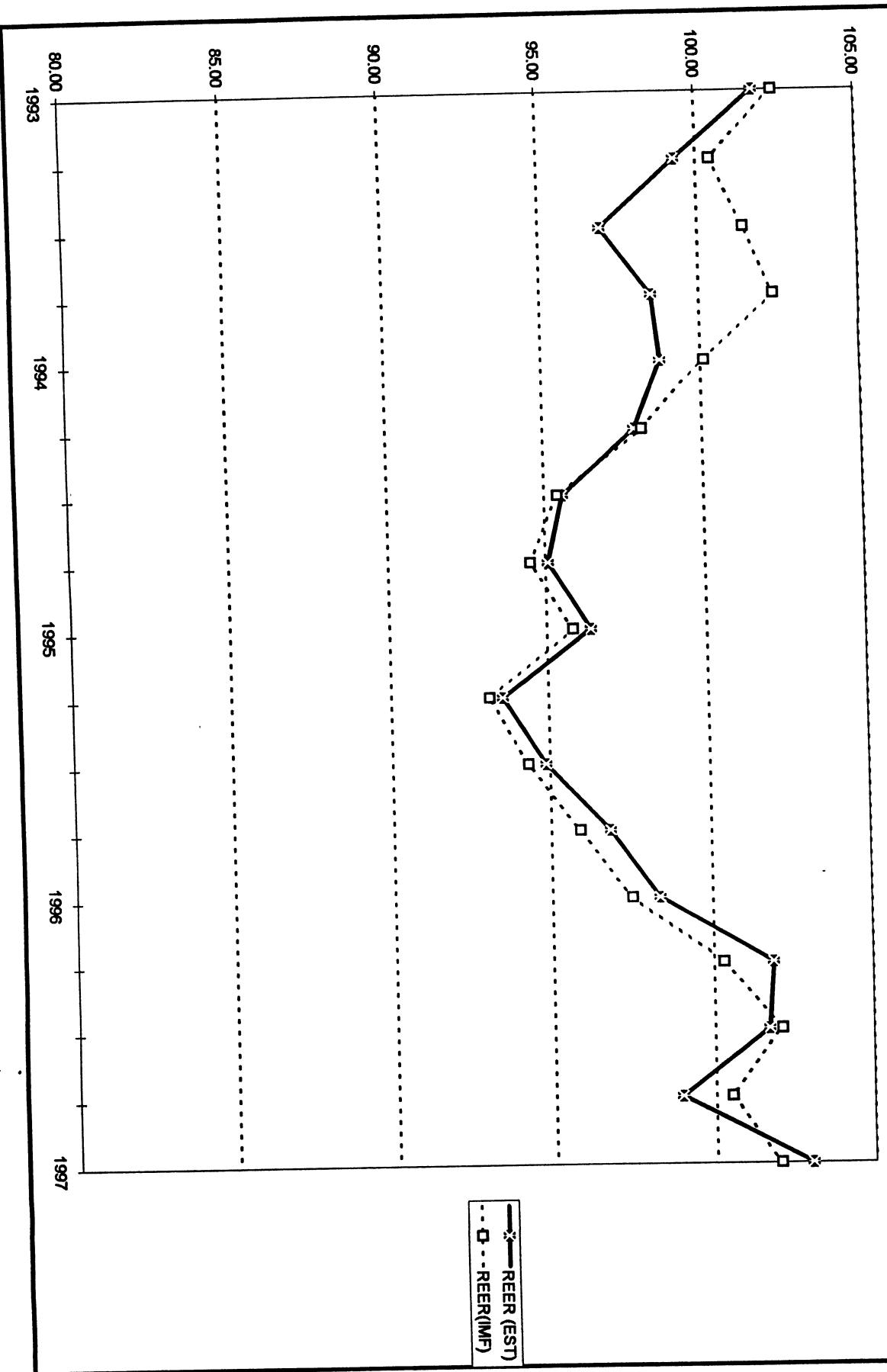
rate must be viewed within the context of the 'sustainability' of present and prospective levels of the current account deficit of the balance of payments.

Current account deficits can be sustained for a while through the drawing down of reserves and through external borrowing. Largely as a result of fiscal expansion, Belize reserves fell from 4.2 months of import coverage in 1990 to 1.4 month in 1994. Ad hoc rationing of foreign exchange by Central Bank has been in place since April of 1995, and Government contracted a US\$ 26.1 mn balance of payments support loan from the Republic of China, Taiwan in 1996. Fiscal adjustments must be made in the short term if external balance is to be achieved. Furthermore, the trend in the REER has been upward (by 9.6%) since the second quarter of 1995, indicating a moderate loss of competitiveness. It is better for Belize to enter the era of liberalized trade on a more secure footing as further adjustments will be necessary when that time comes.

The methodology used in this exercise to calculate Belize's real effective exchange rate is by no means perfect. It is hoped though, that it will form the basis from which this important indicator can be measured and monitored on a continuous basis.

Chart 1

Quarterly Estimates of Real Effective Exchange Rate for Belize  
(1990=100)



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Appendix A-1

Partners and Trade Weights for Belize

	IMF	CBB
United States	39.894699	0.418399649
United Kingdom	11.0713	0.116111367
Japan	8.3521	0.087593485
France	6.4683	0.067836944
Germany	6.4627	0.067778213
Mexico	4.7424	0.049736395
Netherlands	4.2745	0.044829247
Canada	3.5699	0.037439684
Italy	3.1837	0.033389372
Taiwan	3.0685	0
Belgium	2.304	0.024163431
Spain	2.0596	0.021600261
Brazil	1.5807	0
China	1.4839	0.01556255
Thailand	1.4836	0.015559404
Total	99.999899	
Total Excluding Taiwan	95.350699	1

Consumer Price Index 1990 = 100	Appendix A-2											
	1993			1994			1995					
United States	109.5	110.4	110.8	111.6	112.3	113	114	114.5	115.5	116.5		
United Kingdom	109.9	111.7	112	112.4	112.6	114.6	114.6	115.4	116.4	118.5		
Japan	105.5	106.4	106.9	106.6	106.8	107.3	106.9	107.5	107	107.2		
France	107.1	107.8	108	108.5	109	109.6	109.8	110.3	110.9	111.4		
Germany	108.6	109.6	110.3	110.4	111.9	112.6	113.3	113.2	114.1	114.7		
Mexico	151.5	154.3	156.8	159.4	162.5	165	167.4	170.5	186.9	220.7		
Netherlands	107.8	108.7	109.8	110.3	111	111.9	112.7	113.3	113.7	114.3		
Canada	108.7	108.9	109.3	109.8	109.3	108.9	109.5	109.8	111	111.8		
Italy	114.8	116.2	117.3	118.5	120	120.8	121.8	123.1	126.4	126.7		
Taiwan												
Belgium	107.7	108.1	109.2	109.5	110.3	110.9	111.9	111.7	112.3	112.5		
Spain	115.4	116.5	118	119.4	121.2	122.2	123.5	124.6	127	128.4		
Brazil												
China	120.32	119.62	120.73	121.18	181.93	181.31	179.59	177.92	176.34	174.51		
Thailand	116.6	113.1	114.7	115.4	117	119	121	121.3	122.7	125		
Belize	109.6	109.5	106	107.6	108	109	109.4	109.6	110.5	111.6		

Market Exchange Rate 1990 = 100	Appendix A-3				
	1993	1994	1995	1996	1997
United States	100	100	100	100	100
United Kingdom	82.7	83.3	84.2	86.9	88.7
Japan	119.2	134	139.5	145.5	150
France	97.9	92.7	95.5	101.5	105.2
Germany	98.6	93.5	97	103.2	109
Mexico	90.51	88.79	84.15	82.86	47.14
Netherlands	98.8	94	97.4	103.7	109.6
Canada	92.5	87	84.4	85.1	82.9
Italy	77.5	71	74.6	76.1	73
Taiwan	99	93.5	97.4	103.5	109.4
Belgium	87.2	72	74.5	78.6	77.8
Spain	83.11	82.52	55.15	55.68	56.71
Brazil	101.05	100.91	101.54	102.38	102.54
China					
Thailand					
Belize	100	100	100	100	100







Market Exchange Rate  
1990 = 100

1996 Appendix A-3

1997

United States	100	100	100	100	100	100	100
United Kingdom	88.2	87.4	85.8	85.4	87.1	91.8	91.4
Japan	153.8	142.1	136.2	134	132.3	127.8	119
France	109.8	110.2	107.9	105.3	106.6	105	97.1
Germany	112.6	113.2	109.8	105.9	107.6	105.3	97.2
Mexico	45.23	38.33	37.37	37.58	37.21	35.9	35.77
Netherlands	113.3	113.9	110.5	106.7	108.1	105.8	97.5
Canada	86.1	86	85.2	85.5	85.2	86.4	85.9
Italy	74.3	74.8	76	76.9	78.6	78.6	73.1
Taiwan							
Belgium	113.3	113.8	110.4	106.5	108.1	105.7	97.5
Spain	82.7	83.1	82.2	79.7	80.3	79.7	80.3
Brazil							
China	57.57	57.62	57.49	57.44	57.56	57.63	57.66
Thailand	102.6	101.76	101.3	101.13	101.02	100.38	98.98
Belize	100	100	100	100	100	100	100

Appendix A-5

REER	1993	1994	1995
United States	3.89	3.90	3.91
United Kingdom	1.06	1.06	1.07
Japan	0.83	0.84	0.85
France	0.63	0.63	0.64
Germany	0.63	0.63	0.64
Mexico	0.47	0.48	0.45
Netherlands	0.42	0.42	0.42
Canada	0.35	0.34	0.34
Italy	0.30	0.30	0.30
Taiwan			
Belgium	0.22	0.22	0.23
Spain	0.20	0.20	0.20
Brazil			
China	0.14	0.14	0.14
Thailand	0.15	0.15	0.15
	10766.64	11024.53	10935.03
	10922.37	10937.16	11135.50
	10937.16	11447.20	11528.31
	11447.20	11930.01	11856.70
REER (EST)	10960	10800	11050
	101.80	98.75	96.38
	99.32	98.51	95.57
REER(IMF)	102.4	100.1	95.8
	100.4	98.1	94.5
	101.4	102.3	93.1
	10760	10900	11160
	98.51	97.89	93.55
	98.51	95.7	94.88
	102.3	94.5	94.3

Appendix A-4

NEER	1996			1997		
United States	1.93	1.93	1.93	1.93	1.93	1.93
United Kingdom	0.52	0.52	0.52	0.52	0.52	0.52
Japan	0.43	0.43	0.43	0.43	0.42	0.42
France	0.32	0.32	0.32	0.32	0.32	0.31
Germany	0.32	0.32	0.32	0.32	0.32	0.31
Mexico	0.18	0.18	0.18	0.18	0.18	0.18
Netherlands	0.21	0.21	0.21	0.21	0.21	0.21
Canada	0.17	0.17	0.17	0.17	0.17	0.17
Italy	0.14	0.14	0.14	0.15	0.15	0.14
Taiwan						
Belgium	0.11	0.11	0.11	0.11	0.11	0.11
Spain	0.10	0.10	0.09	0.09	0.09	0.09
Brazil						
China	0.06	0.06	0.06	0.06	0.06	0.06
Thailand	0.07	0.07	0.07	0.07	0.07	0.07
(Sum)	96.44	95.21	94.41	94.82	94.59	92.16
<b>NEER</b>	<b>103.6917</b>	<b>105.0349</b>	<b>105.9226</b>	<b>105.467</b>	<b>105.7232</b>	<b>108.5048</b>

Appendix A-5

REER	1996				1997			
United States	3.92	3.92	3.93	3.93	3.93	3.93	3.93	3.94
United Kingdom	1.07	1.07	1.07	1.08	1.08	1.08	1.08	1.08
Japan	0.84	0.84	0.84	0.84	0.83	0.83	0.83	0.83
France	0.64	0.64	0.64	0.64	0.64	0.64	0.63	0.63
Germany	0.64	0.64	0.64	0.64	0.66	0.66	0.63	0.63
Mexico	0.46	0.46	0.46	0.47	0.47	0.47	0.47	0.47
Netherlands	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42
Canada	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34
Italy	0.31	0.31	0.31	0.31	0.31	0.31	0.31	0.31
Taiwan								
Belgium	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Spain	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Brazil								
China	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Thailand	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
	11758.73	11731.25	11770.66	11887.18	12244.68	11745.64		
REER (EST)	11390	11540	11990	12090	12120	12100	12100	12100
	96.86	98.37	101.86	101.71	98.98	103.02	103.02	103.02
REER(IMF)	95.9	97.5	100.3	102.1	100.5	102	102	102

	BELLIZE TRADE US \$MMN			EXPORTS			IMPORTS			TOT. EXP TOT. IMP. EXP. & IMP			SH. EXP.	SH. IMP	SH. TOT.
	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988-90	1988-90	1988-90			
United States	1	55.76	61.92	55.75	103	123.21	120.44	173.43	346.65	520.08	45.687566	56.211387	52.201668		
United Kingdom	21	37.61	41.75	45.03	14.59	18.06	21.8	124.39	54.45	178.84	32.768704	8.829396	17.950597		
Mexico	72	11.58	12.86	10	15.66	17.98	19.89	34.44	53.53	87.97	9.072708	8.680212	8.829758		
Canada	2	4.23	4.69	4.75	6.84	6.86	5.87	13.67	19.57	33.24	3.601159	3.173393	3.336378		
Netherlands	15	0.02	0.02	0.15	7.79	10.47	8.69	0.19	26.95	27.14	0.050053	4.370105	2.724106		
Jamaica	71	3.97	4.41	4.64	3.52	4.75	4.37	13.02	12.64	25.66	3.429926	2.049652	2.575555		
Japan	4	0.11	0.12	0.73	2.47	8.07	8.91	0.96	19.45	20.41	0.252898	3.153935	2.048600		
Taiwan	40	0	0	0	3.21	5.5	5.27	0	13.98	13.98	0.000000	2.266941	1.403206		
Trinidad and Tobago	80	3.7	4.11	2.94	0.57	0.67	1.59	10.75	2.83	13.58	2.831928	0.458902	1.363057		
Denmark	8	0	0.01	0	3.16	3.78	3.07	0.01	10.01	10.02	0.002634	1.623182	1.005731		
France	10	0.43	0.47	0.92	1.33	1.54	4.83	1.82	7.7	9.52	0.479452	1.248601	0.955545		
Guatemala	68	0.3	0.34	0.24	2.27	2.48	1.85	0.88	6.6	7.48	0.231823	1.070230	0.750785		
Honduras	70	0.14	0.15	0.1	1.51	1.37	1.03	0.39	3.91	4.3	0.102740	0.634030	0.431601		
Dominica	62	0	0	0	1.31	1.52	1.41	0	4.24	4.24	0.000000	0.687542	0.425579		
Hong Kong	29	0	0	0.36	0.72	0.98	1.86	0.36	3.56	3.92	0.094837	0.577275	0.393460		
Korea	32	0	0	0	1.13	1.13	1.17	0	3.43	3.43	0.000000	0.556195	0.344277		
Barbados	56	0.97	1.08	1.14	0.03	0.03	0.03	3.19	0.09	3.28	0.840358	0.014594	0.329221		
Grenada	66	0	0	0	0.83	1.37	1.03	0	3.23	3.23	0.000000	0.523764	0.324203		
Germany	11	0.03	0.03	0.44	0.76	0.9	0.97	0.5	2.63	3.13	0.131718	0.426470	0.314166		
New Zealand	5	0	0	0	0.72	0.89	0.66	0	2.27	2.27	0.000000	0.368094	0.227845		
Ireland	13	0	0	0	0.61	0.69	0.88	0	2.18	2.18	0.000000	0.353500	0.218812		
Italy	14	0	0	0	0.53	0.92	0.66	0	2.11	2.11	0.000000	0.342149	0.211786		
Colombia	60	0.03	0.03	0.02	0.39	0.92	0.49	0.08	1.8	1.88	0.021075	0.291881	0.188700		
Spain	18	0	0	0	0.64	0.67	0.44	0	1.75	1.75	0.000000	0.283773	0.175652		
Switzerland	20	0.05	0.05	0.04	0.4	0.36	0.4	0.14	1.16	1.3	0.036881	0.188101	0.130484		
China	28	0	0	0	0.04	0.05	1.13	0	1.22	1.22	0.000000	0.197830	0.122454		
Bermuda	57	0.1	0.11	0.07	0.05	0.11	0.53	0.28	0.69	0.97	0.073762	0.111888	0.097361		
Norway	16	0	0.01	0	0.31	0.28	0.21	0.01	0.8	0.81	0.002634	0.129725	0.081302		
India	30	0.03	0.03	0.02	0.26	0.24	0.19	0.08	0.69	0.77	0.021075	0.111888	0.077287		
Belgium/Lux	7	0	0	0	0.26	0.24	0.22	0	0.72	0.72	0.000000	0.116752	0.072268		
Sri Lanka	37	0	0	0	0.24	0.22	0.17	0	0.63	0.63	0.000000	0.102158	0.063235		
Singapore	36	0	0	0	0.24	0.22	0.16	0	0.62	0.62	0.000000	0.100537	0.062231		
Sweden	19	0	0	0	0.22	0.2	0.17	0	0.59	0.59	0.000000	0.095672	0.059220		
Panama	75	0.04	0.04	0.03	0.15	0.15	0.11	0.11	0.41	0.52	0.028978	0.066484	0.052194		

## Appendix B

	BELIZE TRADE US \$MN			EXPORTS			IMPORTS			TOT. EXP TOT. IMP. EXP. & IMP			SH. EXP.	SH. IMP	SH. TOT.
	1988	1989	1990	1988	1989	1990	1988	1989	1990	1988-90	1988-90	1988-90			
Costa Rica	61	0.06	0.06	0.04	0.1	0.09	0.07	0.16	0.26	0.42	0.042150	0.042161	0.042156		
Argentina	53	0	0	0	0.16	0.14	0.11	0	0.41	0.41	0.000000	0.066484	0.041153		
Finland	9	0	0	0	0.14	0.15	0.1	0	0.39	0.39	0.000000	0.063241	0.039145		
Austria	6	0	0	0	0.04	0.15	0.13	0	0.32	0.32	0.000000	0.051890	0.032119		
Czechoslovakia	41	0	0	0	0.12	0.1	0.08	0	0.3	0.3	0.000000	0.048647	0.030112		
Netherlands Antilles	73	0.03	0.03	0.03	0.06	0.06	0.07	0.09	0.19	0.28	0.023709	0.030810	0.028104		
Malaysia	33	0	0	0.15	0.02	0.02	0.04	0.15	0.08	0.23	0.039515	0.012972	0.023086		
Antigua & Barbuda	54	0.02	0.02	0.02	0.06	0.06	0.05	0.06	0.17	0.23	0.015806	0.027567	0.023086		
Eastern Germany	84	0.02	0.02	0.02	0.06	0.06	0.04	0.06	0.16	0.22	0.015806	0.025945	0.0222082		
Portugal	17	0	0	0	0.08	0.07	0.06	0	0.21	0.21	0.000000	0.034053	0.021078		
Australia	3	0	0	0	0.05	0.13	0.03	0	0.21	0.21	0.000000	0.034053	0.021078		
Haiti	69	0.06	0.07	0.07	0	0	0	0.2	0	0.2	0.052687	0.000000	0.020074		
Peru	76	0	0	0	0	0.14	0.01	0	0.15	0.15	0.000000	0.024323	0.015056		
Ecuador	64	0.01	0.01	0	0.04	0.04	0.03	0.02	0.11	0.13	0.005269	0.017837	0.013048		
Egypt	51	0	0	0	0.01	0.04	0.04	0	0.09	0.09	0.000000	0.014594	0.009034		
U.S.S.R. (former)	85	0	0	0	0.03	0.03	0.03	0	0.09	0.09	0.000000	0.014594	0.009034		
St. Kitts and Nevis	77	0	0	0	0.02	0.03	0.03	0	0.08	0.08	0.000000	0.012972	0.008030		
Venezuela	82	0	0	0	0.03	0.02	0.02	0	0.07	0.07	0.000000	0.011351	0.007026		
Guadaloupe	67	0.02	0.02	0.02	0	0	0	0.06	0	0.06	0.015806	0.000000	0.006022		
Nicaragua	74	0.01	0.02	0.02	0	0	0	0.05	0	0.05	0.013172	0.000000	0.005019		
South Africa	23	0	0	0	0	0.04	0	0	0.04	0.04	0.000000	0.006486	0.004015		
Thailand	38	0	0	0	0	0.04	0	0	0.04	0.04	0.000000	0.006486	0.004015		
Indonesia	31	0	0	0	0.01	0.01	0.01	0	0.03	0.03	0.000000	0.004865	0.003011		
Hungary	42	0	0	0	0.01	0.01	0.01	0	0.03	0.03	0.000000	0.004865	0.003011		
Poland	44	0	0	0	0.01	0.01	0.01	0	0.03	0.03	0.000000	0.004865	0.003011		
Romania	45	0	0	0	0.01	0.01	0.01	0	0.03	0.03	0.000000	0.004865	0.003011		
Bahamas	55	0.01	0.01	0.01	0	0	0	0.03	0	0.03	0.007903	0.000000	0.003011		
Dominican Republic	63	0	0	0	0.01	0.01	0.01	0	0.03	0.03	0.000000	0.004865	0.003011		
El Salvador	65	0	0	0	0.01	0.01	0.01	0	0.03	0.03	0.000000	0.004865	0.003011		
Uruguay	81	0	0	0	0.01	0.01	0.01	0	0.03	0.03	0.000000	0.004865	0.003011		
Tunisia	24	0	0	0.01	0	0	0	0.01	0	0.01	0.002634	0.000000	0.001004		
Pakistan	34	0	0	0	0	0.01	0	0	0.01	0.01	0.000000	0.001622	0.001004		
Yugoslavia	50	0	0	0.01	0	0	0	0.01	0	0.01	0.002634	0.000000	0.001004		
Israel	52	0	0	0	0	0.01	0	0	0.01	0.01	0.000000	0.001622	0.001004		



Appendix B

BELIZE TRADE US \$MN	EXPORTS			IMPORTS			TOT. EXP TOT. IMP. EXP. & IMP			SH. EXP.	SH. IMP	SH. TOT.	
	1988	1989	1990	1988	1989	1990	1988-90	1988-90	1988-90				
Greece	12	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Malawi	22	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Other Africa	25	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Afghanistan	26	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Bangladesh	27	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Philippines	35	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Tonga	39	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Malta	43	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Bolivia	58	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Brazil	59	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
St. Lucia	78	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
St. Vincent & Grens.	79	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
Western Hem.	83	0	0	0	0	0	0	0	0	0.000000	0.000000	0.000000	
TOTALS	119.34	132.49	127.77	0	176.85	218.33	221.51	379.6	616.69	996.29	100.000000	100.000000	100.000000