

**RELATIVE PRICES AND IMPORTS  
IN SMALL OPEN ECONOMIES**

by

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**Relative Prices and Imports in Small Open Economies**

Trade policy recommendations are part of the standard package of adjustment strategies supported by the international financial agencies. Their basic premise is that import ratios are strongly influenced by relative prices. For a given national income a country may reduce the import ratio by increasing the effective price of imports to domestic consumers either by protection or by devaluation; protection is inefficient and devaluation is the preferred vehicle. However, the basic tenet that more expensive imports mean fewer imports remains untested. Moreover, it is not very plausible for small open economies.

Small open economies do not have the material resources to satisfy basic needs for food, clothing and shelter, nor can they attain a tolerably efficient scale of production in more than a few activities. It is not by coincidence that they invariably specialize in the production of one or two traded goods or services. That is what their human resource endowment will permit, for anything better than subsistence production.

We should therefore expect small open economies to export and import to the extent their incomes permit however expensive and inconvenient importing may become. Devaluation and import substituting protection will have no effect except to the extent that they reduce real incomes and the ability to purchase imports. By the same token the removal of protection will be innocuous at best and will certainly not have the effect of diverting resources from import substitution - though many import substituting firms invariably collapse.

This note presents some preliminary evidence on the sensitivity of imports to relative price changes for the Caribbean. Small countries are expected to have relatively high ratios of imports to income. Population is used as a measure of size. Richer small open economies will no doubt have higher import to income ratios than poorer because they demand a wider range and higher quality of imports and the import content of their consumption is probably higher. Compared with these factors, do relative prices have a measurable affect on the ratios of imports to income? To answer this question a relative price variable is included with real per capita income and population as variables to explain the ratio of imports to income. The test equation is as follows:

$$\text{Log } (M/Y) = f(\text{log YPC, log POP, log RP})$$

Where *M/Y*: ratio of imports to GDP  
*YPC*: real per capita income  
*POP*: population size  
*RP*: relative price

The test is carried out for fourteen Caribbean territories for varying years from the mid-1960s to the early 1990s. The data are pooled and the test is run in log linear form. Data are drawn from the [International Financial Statistics](#). The relative price variable is the exchange rate in domestic currency per unit of US dollars times the ratio of US retail prices to domestic retail prices. The relative price of imports increases with devaluation provided domestic inflation is sufficiently slower than foreign inflation.

## The Results

Income levels, size and relative prices together explain 70% of the variation in the import to GDP ratio in a fairly well specified equation. All the variables in the equation appear to be I(1) and the cointegrating vector is (0). Except for Haiti the predictions mostly lie within a tolerable range.

If real income per capita is 1% higher the import to GDP ratio is 0.06% higher. Where the population is 1% higher the ratio is 0.25% lower. These results which are statistically significant are as expected. However, if the value of the domestic currency is 1% lower (the ratio of domestic to foreign inflation remaining the same) or domestic inflation is lower than foreign inflation (currency values remaining the same) by 1% the import to GDP ratio is higher by 0.22%. That is to say, even though local goods are cheaper, the ratio of income spent on foreign goods is higher. This result is also statistically significant.

This is a surprising result. Conventional trade policy depends on a negative elasticity of imports with respect to relative prices. More reasonably, one should expect a zero elasticity. A positive elasticity means that conventional trade policy will have perverse results.

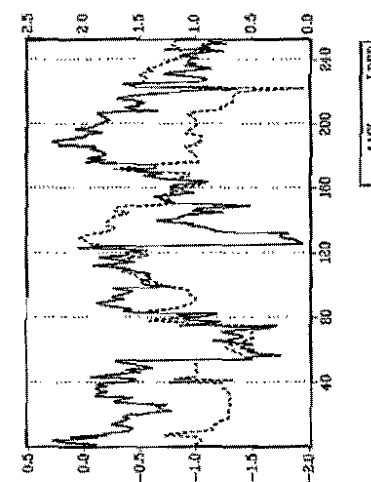
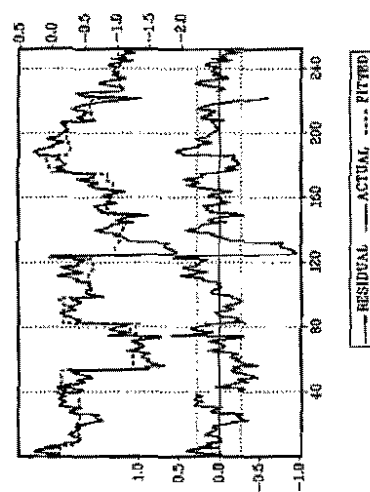
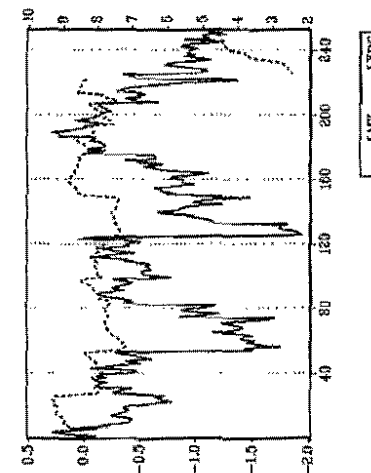
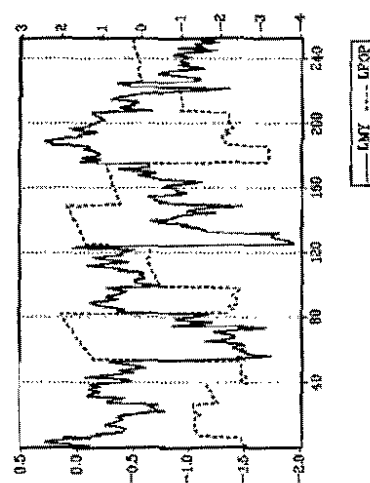
A positive elasticity might reflect quality differences which the import data do not measure. Countries where domestic currencies are stronger and where domestic inflation is weaker may appear to import less relative to income because their purchases are of higher quality.

Alternatively, they may import more services and fewer goods, for example, by travelling abroad more frequently (Caribbean tourists abroad count as an import service). Another possibility is that there may be factors (apart from per capita income and size which we have accounted for) which affect both the import to GDP ratio and relative prices. This possibility may be further explored.

### Conclusion

Although no economic test is conclusive because of well-known limitations of data and methodology but an apparently well-specified test of the determinants of imports using a large number of observations (247) gives no support to the notion that countries where imports are more expensive will have a lower import dependence. To the contrary it appears such countries have greater import dependence all things being equal. We should therefore not expect trade and exchange rate policies to have conventional results and we should be on the lookout for perverse effects.

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 February 1, 1994



LS // Dependent Variable is LMY  
 Date: 4-12-1995 / Time: 15:55  
 SMPL range: 1 - 251  
 Observations excluded because of missing data.  
 Number of observations: 247

VARIABLE	COEFFICIENT	STD. ERROR	T-STAT.	2-TAIL SIG.
C	-1.5240838	0.1162643	-13.108784	0.0000
LYPC	0.0638821	0.0123144	5.1876070	0.0000
LPOP	-0.2546979	0.0116364	-21.887970	0.0000
LRER	0.2235514	0.0468767	4.7689205	0.0000
R-squared	0.706663	Mean of dependent var	-0.649031	
Adjusted R-squared	0.703041	S.D. of dependent var	0.492059	
S.E. of regression	0.268142	Sum of squared resid	17.47175	
Log likelihood	-23.35063	F-statistic	195.1325	
Durbin-Watson stat	0.426983	Prob(F-statistic)	0.000000	