

accruing to domestic factors were recomputed. (Average wages are reported in greater detail in Table 10, compared to Table 9.) These were all computed indirectly. The last column represents the average man-years per \$1,000 of current US claims (f^{**}) arising from the investments. The surprising result here, which can be seen better in the accompanying figure, is that the rich countries still have, on the average a larger employment impact per \$1,000 of US current factor claims on the value added. The poorest performers in this regard are the petroleum areas -- Venezuela and the Middle East. The European countries perform much better than any other region, with Mexico and other Central American regions appearing relatively close. So, from this finding, we discover that US investments yielded more employment impact per US \$1,000 of current claims on the value added in the more advanced regions than in the low wage areas.

Figure 1 makes a scatter of observations just mentioned. The man-years of employment per \$1,000 of US claims are represented on the vertical axis, and the host country wage bill ratio (w^{**}/f^{**}) on the horizontal. It is interesting to see how low the employment conversion of the ratio (w^{**}/f^{**}). Asia and South America appear to be in the bottom. However, Central America appears to perform quite well in terms of direct labor impact. Guatemala, where banana plantations dominate the US investments, appeared to have a major labor conversion. The

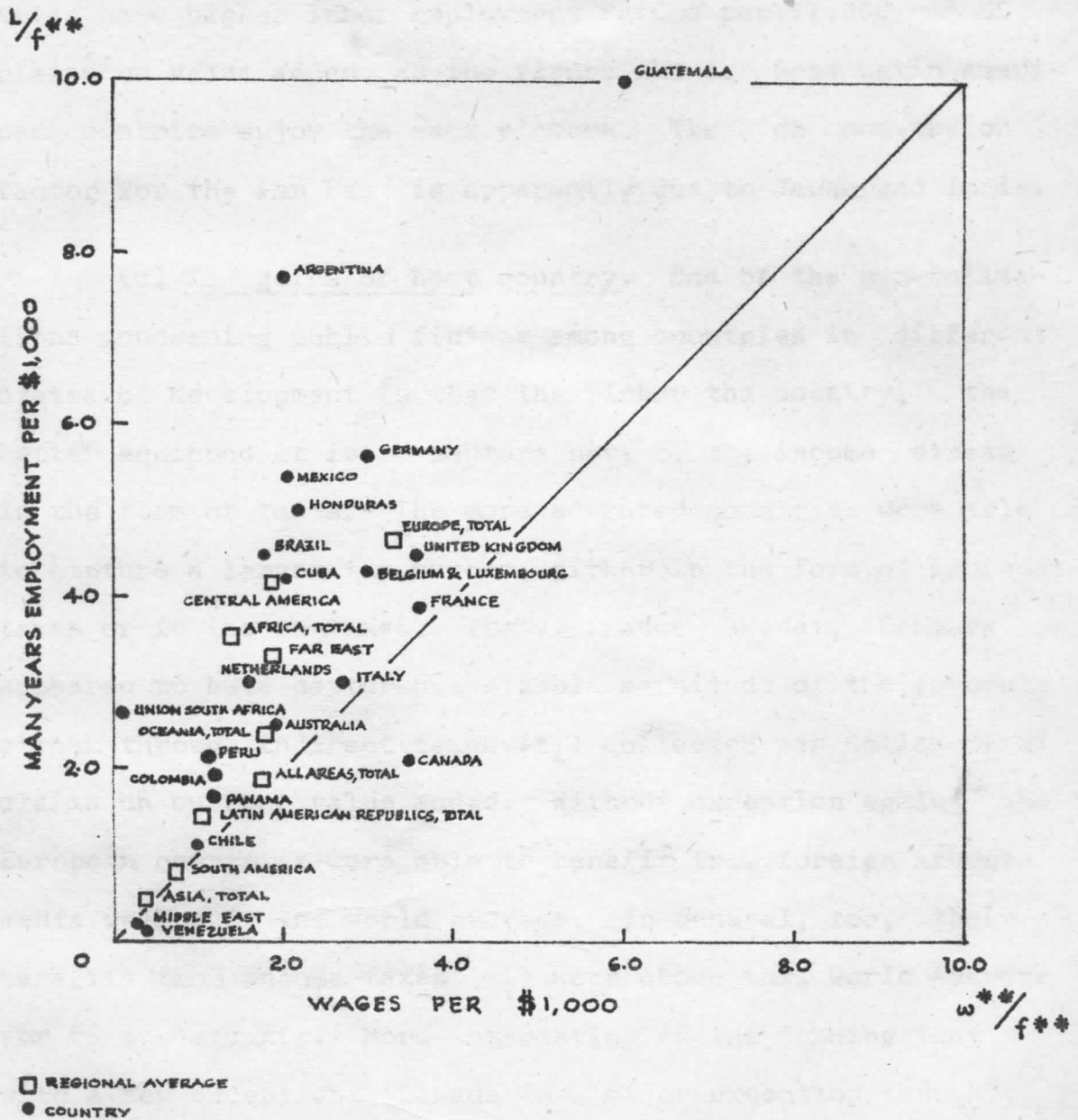


FIGURE 1. MANYEARS OF EMPLOYMENT AND WAGES PER \$1,000 OF US FACTOR CLAIMS

more interesting phenomenon is that most of the European countries have higher labor employment ratios per \$1,000 of US claims on value added, as the figure shows. Some Latin American countries enjoy the same picture. The high conversion factor for the Far East is apparently due to Japan and India.

(c) Tax gains of host country. One of the generalizations concerning public finance among countries in different states of development is that the richer the country, the better equipped it is to capture part of the income stream in the form of taxes. The more advanced countries were able to capture a larger tax stream, either in the form of indirect taxes or in income taxes. Italy, France, Sweden, Denmark appeared to have captured a sizable magnitude of the payments stream through indirect taxes (t_1) collected per dollar of US claims on current value added. Without exception again, the European countries were able to benefit from foreign investments well over the world average. In general, too, their benefits from income taxes (t_2) were above this world average for US investments. More interesting is the finding that, with a few exceptions (Canada is a major exception though), many of the industrial countries had tax gains larger than the gains from wage payments to their own labor per dollar of US claims. The noteworthy examples of these are Italy, France, Norway, Denmark, Sweden, and Netherlands. On the other hand, the combined tax benefits of the less developed

countries are less than the wage benefits, except India.⁹

For the developed countries, what does not flow in the form of wage payments to host country labor is captured firstly and substantially, by an efficient indirect taxation machinery and, secondly, also by higher rates of income taxes. Since these items benefit the host country, they go to the numerator of the ratios. In the less developed countries, because the tax machinery is not able to capture other payments flows, the additional claims on value added created by the enterprises become residually the claims of the foreign investors. So these additional claims go to the denominator of the ratio and therefore reduces the ratio of the host country's factor gains.

We are led to the following findings: per US dollar of current claims of value added for US investments, the more developed countries have higher wage and employment impact compared to the less developed; moreover, they have much higher rates of taxation than the poorer countries. Thus, it is no wonder that the total factor gains ratios for the more developed countries are higher, on account of both findings.

(d) Profits of host factors. These gains are insignificant. With the exception of Canada, Rhodesia, and the Union of South Africa, the benefits on account of these are few. This

⁹India's case is easily explained by the high tax rates in that country. See A.R. Negandhi, "Obstacles to Private Foreign Investments in India," *Economic Record*, vol. 41 (December, 1965), pp. 612-7.

is because, in general, the equity ratios for US investments are so much in favor of American nationals. The details of these gains may be reviewed by referring to Tables 6 and 7 and the implied equity ratios from Table 4.

Indirect Value Added

The measure which we have suggested has a serious limitation in the sense that it applies only to the direct value added contributed by the enterprise. Yet, the secondary impact of activities generated by an enterprise are more crucial in terms of overall contribution to the economy than the immediate one.

An enterprise which buys completely all its inputs by importing them has no effects on the sectors located nearer than this enterprise to the primary sectors. On the other hand, if all the output of the enterprise is sold for direct consumption or export, then it deals directly to the final demand sector and does not feed its output as input of other industries. For both situations to exist for an enterprise is rare. Such would constitute an example of the 100 per cent enclave enterprise, which has no link to the rest of the host economy.

Most enterprises will have some form of linkage to the host economy. There are scanty data in the Survey of US Direct Investments that give us some indirect information on how the indirect value added may be computed. The method shown below

is just suggestive and only demonstrates a crude form of backward linkage. The reader should be forewarned that the subsequent analysis is based on data which even the US Department of Commerce reports with caution.¹⁰ Having some knowledge of the costs of raw materials purchased by the US enterprises, it was necessary to determine the direct import leakage. This was derived by using the data on imported raw materials called by the description "import other than capital equipment."¹¹ These imports were assumed to be current costs. This yielded the fraction of raw materials imported from total raw materials purchased by the firms, m . Therefore, the fraction of raw materials with domestic impact is $(1-m)$. Thus, the original value of domestic purchases to begin with is $(1-m)M_0$, where M_0 is the total value of raw materials purchased.

¹⁰We quote from page 81: "Among the voluntary schedules requested from the reporters, was one covering imports, in which the respondents were asked to give data on imports of (a) capital equipment and (b) other imports, broken down in each case as between imports from the United States and from other countries. *Information supplied in this schedule was relatively incomplete, and it proved to be impossible to establish a consistent relationship between materials costs and noncapital imports.* Nevertheless, the replies to this voluntary schedule sufficed to indicate the probably magnitudes of imports by the direct-investment enterprises both from the United States and from third countries." (Italics supplied).

¹¹See Tables 33, *US Business Investments in Foreign Countries*, ibid.

Table 11 summarizes the cost of materials purchased by foreign investments by region and the direct import ratio by regions. For our purposes, it is probably sufficient to pursue this question only on a regional basis.

Let δ ($\delta < 1$) be an average domestic feedback ratio for any expenditure transaction in the host country. This ratio will segregate the indirect value added going to host country enterprises and those going to enterprises going to foreigners. Thus, it is an average propensity to spend on host country factors. The immediate indirect value added created by the foreign enterprise, outside of the original direct value added it contributes to host country factors, is equal to

$$\begin{array}{l} \text{immediate secondary value added gain} \\ \text{of nationals} \end{array} = \delta D_0$$

where $D_0 = (1-m)M_0$, the materials purchased domestically. The total indirect value added to host country factors after taking note of further interactions between other enterprises is equivalent to

$$\begin{aligned} D_0 \{1 + \delta + \delta^2 + \dots + \delta^t\} \\ = \left\{ \frac{1}{1 - \delta} \right\} D_0. \end{aligned}$$

Table 11. RAW MATERIAL IMPORTS AND BASIS FOR INDIRECT
VALUE ADDED OF AMERICAN ENTERPRISES

Region	M _o = Total Materials Purchased (million \$)	m=Imported* Materials Ratio	Domestic Impact Ratio = 1 - m
Total	22,025	0.24	0.76
Canada	7,001	0.16	0.84
Latin America			
Total	3,580	0.22	0.78
Mexico, Central America, West Indies	11,213	0.20	0.80
South America	2,367	0.23	0.77
Western Hemisphere dependencies	267	0.24	0.76
Europe			
Total	6,947	0.31	0.69
Common Market	3,143	0.31	0.69
Other Europe	3,804	0.31	0.69
Africa	750	0.43	0.57
Asia	1,732	0.29	0.71
Oceania)		
)	1,750	0.16	0.84
International)		

Derived from Tables 28 and 33, data source.

$$m^* = \frac{\text{Imported raw materials}}{\text{Total materials purchased}}$$

imported raw materials assumed to be equivalent to "imports other than capital equipment" as reported in Table 33.

There are two ways of computing the host country factor gains from the indirect value added created by foreign investments: (1) with respect to the original value added claims accruing to foreigners due to the foreign investment under consideration, in other words, f^{**} , and (2) with respect to the value added which accrues to foreigners as a result either of additional indirect value added claims going to foreigners in other enterprises linked to the original investment and the average propensity to import of the host country.

(1) With respect to original value added claims of foreigners. In accordance with what has been said earlier, we have two indexes -- the immediate indirect value added, and the total indirect value added, as follows:

$$(21) \quad \text{immediate indirect } R = \delta D_0 / f^{**}$$

and

$$(22) \quad \text{total indirect } R = \left(\frac{1}{1-\delta} \right) D_0 / f^{**}.$$

Naturally, since $\left(\frac{1}{1-\delta} \right) > \delta$ and the denominator f^{**} does not change, the value of total indirect R will be greater than the measure of immediate indirect R .

(2) With respect to the foreign leakages arising out of the secondary expenditure streams. Since we have assumed an average domestic feedback ratio, δ , which represents a net propensity to spend on host country inputs, it follows

that $1-\delta$ represents the average propensity to spend on foreign goods (imports) and on foreign factors. The last item refers to the net earnings represented in host country value added which accrue to foreigners because of purchases made on their output. Following the discussion on the domestic feedback ratio, we have the following results:

$$\text{immediate foreign leakage} = (1-\delta)D_0$$

$$\begin{aligned}\text{total indirect foreign claims} &= \left\{ \frac{1}{1-(1-\delta)} \right\} D_0 \\ &= (1/\delta)D_0.\end{aligned}$$

It is easy to see that the host country indexes of indirect value added relative to these measures are:

$$(23) \quad \text{immediate indirect R} = \frac{\delta}{1-\delta}$$

and

$$(24) \quad \text{total indirect R} = \frac{\delta}{1-\delta}.$$

Thus, provided δ is a constant, it does not matter at what stage of purchasing a given expenditure claim generated by a foreign enterprise leads to. The indirect value added claims of foreigners will remain a constant ratio to the indirect value added claims of foreigners and of importations arising from the original foreign investment.

Since the original discussion of host country gains concerns foreign investments, the more pertinent host country gains ratio from the original value added are those given by formulas (21) and (22). We have computed for these indexes in Table 12 assuming two values of δ , as follows:

$$\delta_1 = 0.75 \text{ (perhaps the more realistic value) and}$$

$$\delta_2 = 0.50 \text{ (the conservative estimate).}$$

As the results of Table 12 show, the more developed the economy, the greater is also the indirect value added generated by the enterprise. The European ratios are twice the value for the average ratios for all US investments. Asia and Latin America perform quite badly in terms of these ratios, almost indicating that the indirect effects of foreign investments are not significant. Indeed, some of these findings suggest that before a country can maximize the gains from foreign investments, they should first be developed. But the early stages towards this growth involve relatively smaller gains. To understand the relationship between R^{**} , the direct factor gains ratio, and the ratio for indirect value added created, Figure 2 is drawn. From what has been said, the conclusion is now obvious. The more advanced the country, the greater the gains from the two standpoints: the direct value added and of the total indirect value added of the enterprise.

Table 12. ESTIMATE OF INDIRECT VALUE ADDED IMPACT

R e g i o n	$\delta_1 = 0.75$		$\delta_2 = 0.50$	
	$\frac{\delta_1 D_o}{f^{**}}$	$\frac{\left(\frac{1}{1-\delta_1}\right) D_o}{f^{**}}$	$\frac{\delta_2 D_o}{f^{**}}$	$\frac{\left(\frac{1}{1-\delta_2}\right) M_o}{f^{**}}$
Total	3.33	17.7	2.22	8.7
Canada	5.87	31.4	3.91	15.7
Latin America				
Total	1.71	9.2	1.20	4.6
Mexico, Central America, & West Indies	3.13	16.7	2.15	8.3
South America	1.26	6.6	8.24	3.3
Western Hemisphere dependencies	2.33	12.5	1.55	6.3
Europe				
Total	6.20	32.9	4.11	16.5
Common Market	6.59	35.2	4.39	17.6
Other Europe	5.76	30.6	3.83	15.3
Africa	3.86	20.6	2.56	10.3
Asia	1.07	5.7	0.72	2.8
Oceania	5.39	28.7	3.59	14.3

δ = domestic feedback ratio.

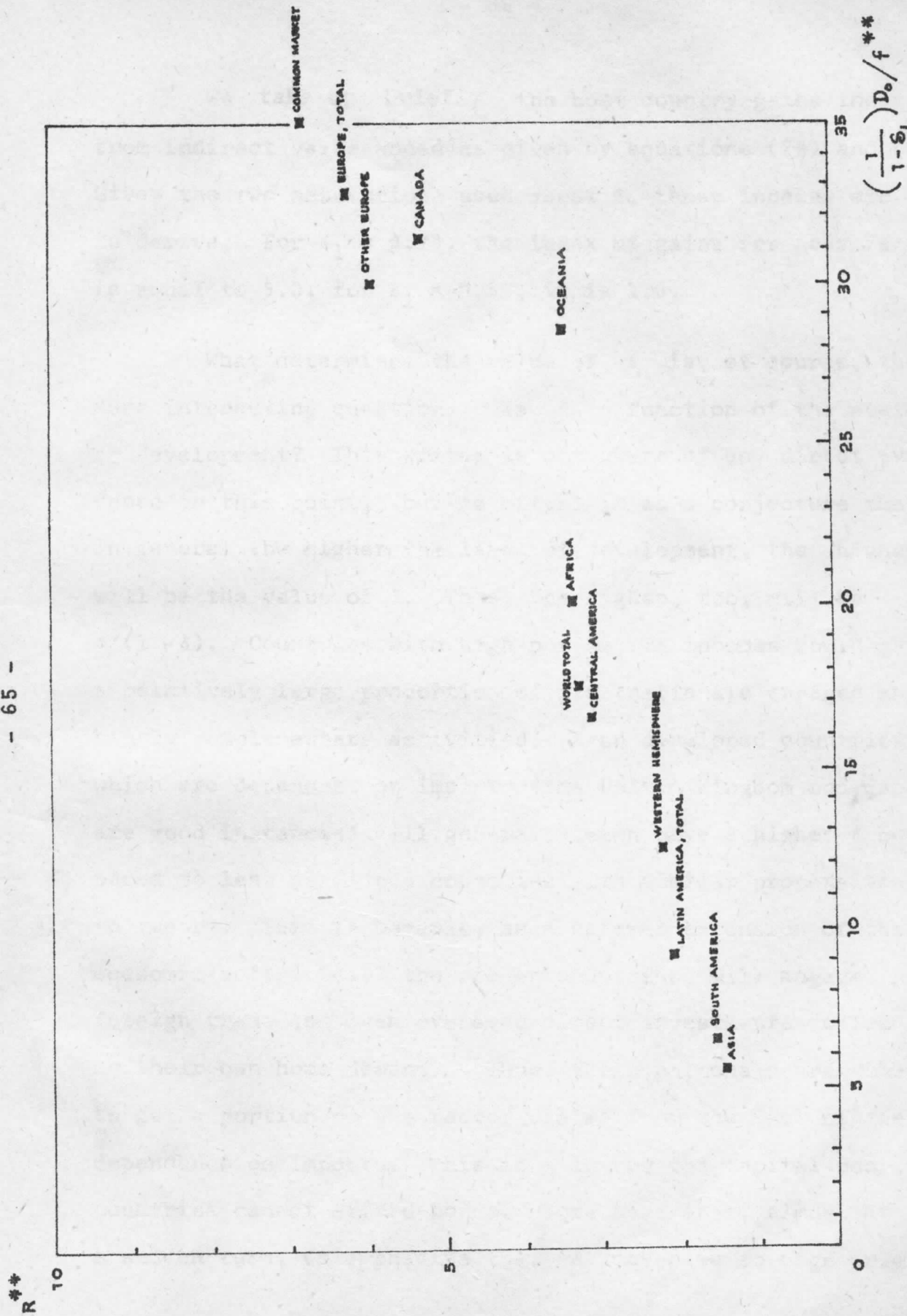


FIGURE 2. RELATION OF DIRECT AND INDIRECT VALUE ADDED PER DOLLAR OF US CLAIMS ON INVESTMENTS, BY REGION

We take up briefly the host country gains indexes from indirect value added as given by equations (23) and (24). Given the two assumptions used about δ , these indexes are easy to derive. For $\delta_1 = 0.75$, the index of gains for host factors is equal to 3.0; for $\delta_2 = 0.50$, it is 1.0.

What determines the value of δ is, of course, the more interesting question. Is δ a function of the state of development? This writer is not aware of any direct evidence on this point, but he offers it as a conjecture that in general the higher the level of development, the higher will be the value of δ . Thus, the higher, too, will be $\delta/(1 - \delta)$. Countries with high per capita incomes would have a relatively large proportion of its nationals engaged in highly complementary activities. Even developed countries which are dependent on imports (the United Kingdom and Japan are good instances) will generally each have a higher δ compared to less developed countries with similar propensities to import. This is because, as a natural extension of their economic activities, the richer countries will engage in foreign trade and even overseas direct investments to feed on their own home demand. Thus, their nationals are able to get a portion of the factor claims from the fact of their dependence on imports. This is a luxury the capital-poor countries cannot afford to do. Note here that, almost at a sudden turn, we emphasize that δ may have foreign origin,