Economic Incentives + Agricultural Exports in DC
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ECONOMIC INCENTIVES AND AGRICULTURAL EXPORTS IN DEVELOPING COUNTRIES

Bela Balassa *

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* The author is Professor of Political Economy at the Johns Hopkins University and Consultant to the World Bank. He is indebted to Gershon Feder for helpful suggestions and to Shigeru Akiyama for carrying out the calculations. Nevertheless, the author alone is responsible for the contents of the paper that should not be interpreted to reflect the views of the World Bank.

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This paper will examine the effects of economic incentives on exports in general, and on agricultural exports in particular, in the developing countries. In view of the questions often raised about the effectiveness of economic incentives in the least developed countries, especially in Sub-Saharan Africa, the experience of latter group of countries will also be reviewed.

Section I will introduce a simple econometric model to estimate the effects of price incentives on exports. In Section II, the model will be applied to the exports of goods and nonfactor services and to merchandise exports. In Section III, the same model will be used to indicate the effects of price incentives on agricultural exports. Finally, Sections IV, V, and VI will present information on the responsiveness of merchandise and agricultural exports to incentives in the 1960-73, 1973-78, and 1978-81 periods, respectively, by making use of intercountry comparisons.

I. Modelling the Response of Exports to Price Incentives

In this section, a simple model consisting of (foreign) export demand and (domestic) export supply equations will be put forward for estimating the effects of price incentives, and of other relevant variables, on exports. Foreign demand for a country's exports (X^F) will be affected by changes in its international competitiveness. This may be indicated by changes in the index of the real exchange rate, derived as the nominal exchange rate (R) adjusted for changes in the prices of traded goods (defined in terms of

wholesale prices [1/]) in foreign countries (P_T^F) and in the domestic economy (P_T^D). [2/] Introducing foreign incomes (Y^F) as an additional variable affecting exports, we obtain equation (1).

$$(1) \qquad X^F = f(R.P_T^F/P_T^D;\ Y^F)$$

In turn, the supply of a country's exports (X^D) will be affected by changes in relative incentives to traded vs. non-traded goods. This may be indicated by an index of relative prices in the domestic economy, derived as the ratio of domestic price indices for traded goods (P_T^D) and for nontraded goods (P_N^D). [3/] Introducing a domestic capacity variable (C^D), we obtain equation (2). Finally, (3) represents the equilibrium condition.

$$(2) \qquad X^D = g(P_T^D/P_N^D;\ C^D)$$

$$(3) \qquad X^D = X^F$$

1/ Wholesale price indices are superior to consumer price indices that include the prices of nontraded goods and are affected by price controls applied in a number of developing countries. The former, but not the latter, objection also applies to the use of GDP deflator in the calculations.

2/ On alternative concepts of the real exchange rate, see Bela Balassa, "Effects of Exchange Rate Changes in Developing Countries," Indian Journal of Economics, Special Anniversary Issue, forthcoming.

3/ Ideally, one would need to consider the price of value added (the effective rate of protection) rather than product prices.

The reduced form equilibrium equation, derived from this system of equations, has been estimated by utilizing time-series data for 53 developing countries and for a subset of 16 Sub-Saharan African countries, for the periods 1965-73 and 1974-82 as well as for the two periods combined. The first of the two periods was characterized by rapid growth in the world economy while the second included the two oil shocks and the ensuing recessions. 1/ The choice of the countries has been dictated by data availabilities, including trade and national income statistics and domestic price indices. 2/

In view of the existence of an intercorrelation between exports and domestic capacity, the export-output ratio has been used as the dependent variable in the estimation. Separate estimates have been made for the exports of goods and nonfactor services as well as for merchandise exports, with the gross domestic product used as the output variable in both cases. In turn, the combined gross domestic product of the developed countries, the principal markets for the exports of developing countries, has been used as the foreign income variable.

Estimation has been done by expressing all variables in terms of rates of change between successive years and combining time-series observations for individual countries. Experimentation with lag structures

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1/ Also, fixed exchange rates among major currencies prevailed in the first period while flexible exchange rates dominated in the second period. This will have relevance, however, primarily for those developing countries that fixed their currency values in terms of a single foreign currency.

2/ Needless to say, the data are subject to considerable error. Nevertheless, there is no reason to assume that these errors would introduce a bias in the results.

has not been successful; hence, the reported estimates utilize data in an unlagged form.

In the event, the index of the real exchange rate, but not the relative price variable for traded and nontraded goods, proved to be statistically significant in the estimation. This is not surprising since changes in the real exchange rate may practically instantaneously result in the redirection of production from domestic to foreign markets while the effects of changes in the relative prices of traded and nontraded goods are slower in coming and may affect exports and output in similar ways. 1/

II. Effects of Price Incentives on Exports

Table 1 reports the results of estimates for the exports of goods and nonfactor services and for merchandise exports, obtained by the use of the model described in Section I, for the 53 developing countries and for the subset of 16 Sub-Saharan African countries. The table shows the individual regression coefficients, their t-values, the number of observations, F-statistics, and the (adjusted) coefficient of determination. The estimates pertain to the 1965-73 and the 1974-82 periods and to the two periods combined.

The real exchange rate variable has the expected sign and it is statistically significant at the 1 percent level for the merchandise exports of the 53 developing countries. The foreign income variable also has the expected sign and it attains the 1 percent level of significance in the equations for the 1965-73 and the 1974-82 periods. However, its significance

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1/ Because of its lack of statistical significance, the relative price variable for traded and nontraded goods has been dropped from the estimating equations reported in the paper.

Table 1

Regression Equations for Export Output Ratios in Developing Countries

(t-values in parenthesis)

	Constant	Real Exchange Rate	Foreign Income	N	F	$\bar{R}^2$
53 Developing Countries						
I. 1965-73						
(a) exports of goods and nonfactor services	-0.11 (-3.11)**	0.25 (3.19)**	2.69 (3.82)**	424	12.64	0.052
(b) merchandise exports	-0.16 (-4.42)**	0.71 (8.50)**	3.75 (5.07)**	424	49.90	0.188
II. 1974-82						
(a) exports of goods and nonfactor services	-0.02 (-1.97)*	0.58 (9.79)**	1.16 (3.11)**	424	54.92	0.203
(b) merchandise exports	-0.03 (-1.77)*	0.78 (9.93)**	1.49 (2.98)**	424	55.84	0.206
III. 1965-82						
(a) exports of goods and nonfactor services	0.00 (0.25)	0.48 (9.84)**	0.51 (2.00)*	901	53.08	0.104
(b) merchandise exports	0.00 (0.39)	0.77 (12.63)**	0.56 (1.76)+	901	84.59	0.157
16 Sub-Saharan African Countries						
I. 1965-73						
(a) exports of goods and nonfactor services	-0.05 (-0.87)	0.37 (1.97)+	1.21 (1.07)	128	2.43	0.022
(b) merchandise exports	-0.14 (-1.77)+	0.27 (1.04)	3.39 (2.17)*	128	2.81	0.028
II. 1974-82						
(a) exports of goods and nonfactor services	-0.02 (1.13)	0.78 (6.60)**	0.95 (1.45)	128	24.44	0.270
(b) merchandise exports	-0.02 (-0.65)	0.91 (4.07)**	1.79 (1.46)	128	10.28	0.127
III. 1965-82						
(a) exports of goods and nonfactor services	0.01 (0.76)	0.88 (8.49)**	0.04 (0.08)	272	36.98	0.210
(b) merchandise exports	0.02 (0.54)	1.01 (5.93)**	0.52 (0.71)	272	18.83	0.116

Source: World Bank data base

Note: (a) The variables have been expressed in terms of rates of changes between successive years for individual countries combining time-series and cross-section observations.
(b) Levels of statistical significance: + 10%; * 5%; ** 1%.

level declines to 5 percent in the equation for the exports of goods and nonfactor services and to 10 percent in the equation for merchandise exports in cases when the two periods are combined.

According to the estimates, a one percent change in the real exchange rate is associated with a 0.77 percent change in the ratio of merchandise exports to output over the entire 1965-82 period. The regression coefficient is slightly lower for the first period (0.71), and slightly higher for the second (0.78), but the difference is not significant statistically.

Larger differences have been obtained for the exports of goods and nonfactor services; the regression coefficient for the real exchange rate variable rises from 0.25 in 1965-73 to 0.58 in 1974-82; it takes the value of 0.48 for the entire period. The difference between the regression coefficients for the 1965-73 and 1974-82 periods is statistically significant at the 1 percent level, indicating a shift in the underlying function.

In view of the relative constancy of the regression coefficient of the real exchange rate variable in the case of merchandise exports, a shift appears to have occurred in regard to nonfactor services. At the same time, the weaker response obtained in regard to services may be explained by reference to the fact that some service items, such as license and management fees, are hardly responsive to exchange rate changes.

The regression coefficients of the foreign income variable declined between the two periods, irrespective of whether one considers the exports of goods and nonfactor services or of goods alone. The coefficients are 2.69 for the exports of goods and nonfactor services and 3.75 for merchandise exports in the first period and 1.16 and 1.49, respectively, in the second, with estimated coefficients of 0.51 and 0.56 for the two periods combined. The

differences are statistically significant at the 10 percent and the 5 percent level, respectively.

It would appear, then, that the income elasticity of demand in the developed countries for the exports of the developing countries decreased in the period of external shocks. The decline in the elasticity seems to relate to the fall in the exports of petroleum that occurred after 1973 in response to the quadrupling of petroleum prices.

These considerations may explain that the decline in the foreign income elasticity is larger for merchandise exports than for the exports of goods and nonfactor services. Nevertheless, the elasticity continues to be lower for goods and nonfactor services than for goods alone, indicating that some service items, such as dividends and interest, are not responsive to income changes in the developed countries.

Note finally that the coefficient of determination of the regression equations is low. This is not surprising, given that the variables are expressed in terms of rates of change; in particular, taking the rate of change of the export-output ratio tends to magnify the errors in the export and output data. Nevertheless, the F-statistics are uniformly high, indicating that the regression equation shows the existence of a significant and systematic relationship of the underlying economic variables.

Table 1 also shows results obtained for 16 Sub-Saharan African countries. The real exchange rate variable again has the expected sign and it is statistically significant at the 1 percent level in the equations for the 1974-82 and the 1965-82 periods but not for the 1965-73 period. In the latter case, the regression coefficient is significant at the 10 percent level for

the exports of goods and nonfactor services and it does not reach this level of significance for goods alone.

Limiting attention to the values taken by the regression coefficients which have a high level of statistical significance, we find that the coefficients for the real exchange rate variable are uniformly higher for the Sub-Saharan African countries than for all developing countries taken together. For the 1974-82 subperiod and for the entire 1965-82 period, the differences between the two sets of estimates are 0.13 and 0.24 percentage points for merchandise exports and 0.20 and 0.40 percentage points, respectively.

The results conflict with popular notions, according to which changes in real exchange rates would have less of an effect on the exports of Sub-Saharan African countries than for countries at higher levels of development. But they are consistent with the observation that African countries which let their exchange rate become greatly overvalued experienced considerable losses in export market shares (Section V).

The regression coefficient of the foreign income variable exhibits a downward shift in the case of the Sub-Saharan African countries as well. The level of statistical significance of the regression coefficients is very low; it exceeds 5 percent only in the case of merchandise exports in the 1965-73 period. This result may be explained by the high share in Sub-Saharan exports of foodstuffs, such as tropical beverages, the exportation of which responds little to income changes in the developed countries. Also, coffee exports, accounting for a large proportion of the exports of several Sub-Saharan African countries, are determined by quotas under the International Coffee

Agreement, which bear little relationship to changes in incomes in the developed countries.

III. Effects of Price Incentives on Agricultural Exports

The above equations have also been estimated for agriculture, with data on agricultural exports and production used in calculating the export-output ratio. In the case of agriculture, estimates have further been made for the ratio of net exports (exports less imports) to output. The estimates pertain to 52 developing countries (51 countries in the case of the net export equations) and to the subset of 16 Sub-Saharan African countries, with the omissions being due to the lack of data on agricultural output and/or exports.

The results again show the responsiveness of exports to changes in the real exchange rate. In the equations for the developing country group, the estimated regression coefficients for agricultural exports are 0.55 for the 1960-73, 0.79 for the 1974-82, and 0.68 for the 1965-82 period. All the coefficients are statistically significant at the 1 percent level (Table 2). As in the case of merchandise exports, then, the regression coefficients estimated for the two periods combined lies between that for the first and for the second period, with coefficient values rising between the two.

A comparison of the results reported in Tables 1 and 2 indicate that the regression coefficients for agricultural exports exceed the coefficients estimated for the exports of goods and services by a considerable margin. At the same time, apart from the 1974-82 period, the coefficients are slightly lower than those for merchandise exports. The following comparisons will be limited to merchandise exports.

Table 2

Regression Equations for Agricultural Exports in Developing Countries

	Constant	Real Exchange Rate	Foreign Income	N	F	$\bar{R}^2$
A. Export-Output Ratio						
52 Developing Countries						
I. 1965-73	-0.05	0.55	1.69	416	7.10	0.029
	(-0.81)	(3.54)**	(1.22)			
II. 1974-82	-0.03	0.79	1.54	416	31.52	0.128
	(-1.57)	(7.44)**	(2.28)*			
III. 1965-82	-0.00	0.68	0.73	884	30.73	0.063
	(-0.21)	(7.47)**	(1.56)			
16 Sub-Saharan African Countries						
I. 1965-73	0.04	1.08	0.43	128	1.75	0.012
	(0.22)	(1.87)+	(0.13)			
II. 1974-82	-0.02	1.15	2.52	128	10.24	0.127
	(-0.36)	(4.00)**	(1.58)			
III. 1965-82	0.04	1.35	0.68	272	14.79	0.092
	(0.85)	(5.26)**	(0.61)			
B. Net Exports - Output Ratio						
51 Developing Countries						
I. 1965-73	0.17	0.42	-7.58	408	0.11	-0.004
	(0.19)	(0.21)	(-0.42)			
II. 1974-82	-1.30	7.89	46.58	408	5.93	0.024
	(-2.14)*	(2.45)*	(2.25)*			
III. 1965-82	-0.65	4.96	14.00	867	4.02	0.007
	(-1.53)	(2.38)*	(1.30)			
16 Sub-Saharan African Countries						
I. 1966-73	1.65	-4.73	-42.65	128	0.42	-0.009
	(0.61)	(-0.52)	(-0.77)			
II. 1974-82	0.12	16.43	6.62	128	6.57	0.081
	(0.15)	(3.55)**	(0.26)			
III. 1965-82	0.07	11.47	-7.72	272	4.39	0.024
	(0.11)	(2.96)**	(-0.46)			

Notes: See Table 1

The regression coefficient for foreign incomes is shown to decline between the two periods in the case of agricultural exports. But, the differences are not significant statistically and the decline is much smaller than for merchandise exports, which include fuels where developing country exports decreased over time. Finally, the regression coefficient of the foreign income variable for the combined period is substantially lower than for the two periods, taken individually, although the level of significance of the estimates is low.

As in the case of merchandise exports, the regression coefficient of the real exchange rate variable for agricultural exports is uniformly higher for the Sub-Saharan African countries than for all developing countries. In fact, the differences are larger in the present case, ranging from one-half for the 1974-82 period to a near doubling for the 1965-73 and the 1965-82 periods; the coefficients are statistically significant at the 1 percent level, except for the first period where the level of significance only approaches 5 percent.

In turn, the statistical significance of the foreign income variable does not even reach the 10 percent level for the countries of Sub-Saharan Africa. This result may be explained by reference to the low income elasticity of demand in the developed countries for foodstuffs and, in particular, for tropical beverages that account for a large proportion of the agricultural exports of the countries of Sub-Saharan Africa.

The coefficient of determination is lower for agricultural exports than for merchandise exports in both the developing country and the Sub-Saharan African country regressions. The differences in the results may be explained by non-price factors, such as the weather, which affect agricultural

production. Nevertheless, apart from the 1965-73 period, the F-statistics are high, in particular in the developing country equations.

The adjusted R^2s and the F-statistics are substantially lower in the equations utilizing the net export ratio as the dependent variable. This result may be explained in part by the fact that errors in the export and the import data are amplified when one takes the difference between the two and in part by the effects on imports of changes in foreign exchange receipts and in the availability of food aid.

The above considerations may also explain the fact that the statistical significance of the real exchange rate variable is lower in the net export equations than in the export equations for the 51 developing countries; the variable is statistically significant at the 5 percent level for the 1974-82 and 1965-82 periods but not for the 1965-73 period. In the former two cases, the values of the regression coefficients are high -- 7.9 and 5.0, respectively. In interpreting this result, it should be recognized that net export-output ratios tend to be small, and hence even a relatively small absolute change can lead to large changes in percentage terms.

The coefficients of the foreign income variable are also high, but their level of statistical significance is low. The same conclusion applies to the equations estimated for Sub-Saharan African countries. And while the coefficients are negative in some cases, no importance should be attached to this result since they are not statistically significant.

The latter conclusion also applies to the real exchange rate variable in the equation for the Sub-Saharan African countries in the first period. However, in the other two equations, this variable is significant at the 1 percent level. It takes values of 16.4 for the 1974-82 period and 11.5 for

the 1965-82 period. While the results are affected by the smallness of the net export-output ratio, they provide evidence of the effects of changes in real exchange rates on trade in agricultural products.

IV. Incentives and Export Performance: Country Experiences in the 1960-73 Period [1/]

A comparison of the experience of eleven semi-industrial countries provides evidence on the effects of incentives on agricultural exports in the 1960-73 period of rapid world economic growth. These countries were classified into four groups on the basis of the system of incentives applied during the period.

The countries of the first group, Korea, Singapore, and Taiwan, adopted outward-oriented policies in the early 1960s. These countries provided essentially a free trade regime to exports, further granting some export subsidies that insured similar treatment to exports and to import substitution in the industry sector. Nor was there discrimination against agricultural exports as agriculture and industry received similar incentives.

The second group, Argentina, Brazil, Colombia, and Mexico, adopted inward-oriented policies, entailing discrimination against exports as well as against agriculture in the postwar period. In the mid 1960s, Brazil and Colombia and, to a lesser extent, Argentina and Mexico reduced -- but did not eliminate -- the bias of the system of incentives against manufactured exports. The extent of discrimination remained especially pronounced against traditional agricultural exports while nontraditional exports received similar

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1/ The discussion draws on Bela Balassa and Associates, Development Strategies in Semi-Industrial Economies, The Johns Hopkins University Press for the World Bank, Baltimore, Md. 1982, ch. 3.

treatment as manufactured exports in Brazil and Colombia but not in Argentina and Mexico.

The third group, Israel and Yugoslavia, limited the bias against exports during the 1950's, but increased this bias afterwards. Finally, inward-oriented policies continued to be applied in Chile and India, which are classified in the fourth group. Chile made some attempts to promote exports in the early 1960s but subsequently resumed its inward-oriented stance, from which India hardly deviated during the period under consideration.

Korea, Singapore, and Taiwan are resource-poor economies, which increased their manufactured exports several times faster than the developing country average during the 1960-73 period. At the same time, the system of incentives applied permitted them to raise agricultural exports at a rapid rate, averaging 28 percent in Korea, 16 percent in Taiwan, and 11 percent in Singapore that hardly has any agricultural base. Correspondingly, the total merchandise exports of the three countries rose at average annual rates of 42, 29, and 30 percent between 1960 and 1973 1/ (Table 3).

At the other extreme, total exports as well as agricultural exports increased at average annual rates of less than 7 percent in India. And while export growth accelerated in Chile between 1960 and 1966 in response to the incentives provided, agricultural and manufactured exports changed little afterwards as the bias against exports greatly intensified.

Israel and Yugoslavia occupied an intermediate position in regard to export incentives as well as export performance. Between 1960 and 1973, their

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1/ In the absence of appropriate deflators, the data refer to the dollar value of exports.

Table 3
Export Growth Rates, 1960-73

	Merchandise Exports			Agricultural Exports		
	1960-66	1966-73	1960-73	1960-66	1966-73	1960-73
Korea	40.0	44.0	42.1	25.2	29.5	27.5
Singapore	28.5	28.5	28.5	2.9	19.2	11.4
Taiwan	23.5	35.5	29.8	15.6	16.3	16.0
Argentina	6.7	10.8	8.9	6.2	7.9	7.1
Brazil	5.4	19.9	13.0	4.5	16.7	10.9
Colombia	1.5	12.7	7.4	1.0	11.1	6.3
Mexico	7.8	8.1	8.0	7.7	5.7	6.6
Israel	15.3	17.0	16.2	9.5	11.7	10.7
Yugoslavia	13.6	13.8	13.7	6.7	9.8	8.4
Chile	10.1	5.3	7.5	22.5	2.7	11.4
India	5.5	7.0	6.3	3.7	9.5	6.8

Source: Bela Balassa and Associates Development Strategies in Semi-Industrial Economies, The Johns Hopkins University Press for the World Bank, Baltimore, Md. 1982, Table 3.1.

merchandise exports rose at average annual rates of 16 and 14 percent, respectively, while agricultural exports increased 11 and 8 percent a year.

Finally, in the second group, Brazil and Colombia experienced a considerable acceleration of the growth of both agricultural and manufactured exports after 1966 in response to increased incentives while smaller changes occurred in Argentina and in Mexico where the reform of the incentive system was less far-reaching. In the first two countries, the acceleration was particularly rapid in agricultural exports, with annual average increases of 17 and 11 percent, respectively, between 1966 and 1973. The corresponding figures were 8 percent for Argentina and 6 percent for Mexico. In all four cases, the rates of growth of manufactured exports, and hence of total merchandise exports, was higher but this occurred from a low base. Thus, the share of manufactured exports in industrial output did not surpass 4 percent in 1973 in Argentina and Brazil while it exceeded 40 percent in the countries of the first group.

V. Incentives and Export Performance: Country Experiences in the 1973-78 Period [1/]

The 1973-78 period was characterized by external shocks in the form of the quadrupling of oil prices in 1973-74 and the world recession of 1974-75. At the same time, policy responses to external shocks differed to a

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1/ The discussion draws on the material presented in Bela Balassa, "Adjustment to External Shocks in Developing Countries," in The Economics of Relative Prices (Béla Csikós-Nagy, Douglas Hague, and Graham Hall, eds). London, Macmillan, 1984, pp. 352-84 and "Adjustment Policies and Development Strategies in Sub-Saharan Africa, 1973-78," in Economic Strategy and Performance, Essays in Honor of Hollis B. Chenery (Moshe Syrquin, Lance Taylor, and Larry E. Westphal, eds.) New York, Academic Press, 1984, pp. 317-40. -- The latter paper also describes the scheme of classification utilized in this paper.

considerable extent among newly-industrializing countries, defined as having per capita incomes between $1100 and $3000 in 1978 and a manufacturing share in GDP of 20 percent or higher in 1977, as well as among less developed countries that occupy the range between the newly-industrializing and the least developed countries.

Within the first group, Korea, Singapore, and Taiwan continued with their outward-oriented policies and were joined by Chile and Uruguay. In turn, after lesser or greater efforts made to reduce the bias of the incentive system against exports in the earlier period, Argentina, Brazil, Israel, Mexico, Portugal, Turkey, and Yugoslavia reaffirmed their inward-oriented policy stance.

Among less developed countries, Kenya, Mauritius, Thailand, and Tunisia applied relatively outward-oriented policies during the period under consideration. Conversely, inward orientation predominated in Egypt, India, Jamaica, Morocco, Peru, the Philippines, Tanzania, and Zambia.

The choice between outward and inward orientation was associated with differences in macroeconomic policies in both newly-industrializing and less developed economies. While outward-oriented countries adopted realistic exchange rates and limited reliance on foreign borrowing, most inward-oriented countries let their exchange rate appreciate, supported by foreign borrowing. At the same time, the borrowed funds were not generally used to promote efficient activities oriented towards exportation.

In the case of Sub-Saharan African countries, the distinction made between alternative policies in terms of outward- and inward-orientation may be further generalized in terms of the extent of public interventions in product, capital, labor, and foreign exchange markets. Depending on the

extent of these interventions, distinction has been made between market-oriented and interventionist economies. The first group includes Botswana, Cameroon, Ivory Coast, Kenya, Malawi, Mauritius, Niger, Togo, and Upper Volta while the second comprises Benin, Ethiopia, Ghana, Madagascar, Mali, Senegal, Sudan, Tanzania, Zaire, and Zambia. 1/ A three-fold classification scheme has also been utilized, with Botswana, Cameroon, Ivory Coast and Mauritius included in the group of private market economies, Benin, Ethiopia, Ghana, Madagascar, Mali, Tanzania and Zambia in the group of étatist countries, and Kenya, Malawi, Niger, Senegal, Sudan, Togo, Upper Volta, and Zaire in an intermediate group.

The policies applied greatly affected export performance in the countries under consideration. This is evidenced by changes in export market shares for each country's traditional primary exports, defined as exports that accounted for more than 1.5 percent of total merchandise exports in the 1971-73 base period, nontraditional primary exports, fuel exports, and manufactured exports. The following discussion will deal with average changes in market shares for merchandise exports and, subsequently, with agricultural exports. The results reported in Tables 4 to 7 show the ratio of average export market shares in the 1974-78 period to the average for the 1971-73 base period.

All the outward-oriented NICs increased their export market shares in the period under consideration, with gains ranging from 3 to 53 percent. In turn, inward-oriented NICs experienced losses in market shares, the only exception being Brazil where the continuation of export subsidies led to

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1/ Among these countries Kenya, Mauritius, and Tanzania were included in the less developed country group.

moderate gains (Table 4). The losses were the largest in Portugal (39 percent), where the April 1974 Revolution also affected the results.

A similar picture emerges in the case of less developed countries. All outward-oriented LDCs gained export market shares, ranging from 8 to 21 percent. In turn, inward-oriented LDCs experienced losses of market shares, ranging from 9 to 29 percent, except that the Philippines had a small gain in response to incentives provided to manufactured exports (Table 5).

The Sub-Saharan African countries, too, fit the pattern. The range of increases in average export shares was between 9 to 81 percent in market economies, except for Cameroon, Niger, and Togo that experienced declines of 4 to 22 percent. In turn, all interventionist countries lost export market shares, with the losses exceeding one-third in Ethiopia, Ghana, and Tanzania, where the policy-induced distortions -- in particular, the overvaluation of the exchange rate -- were the most pronounced (Table 6).

The effects of the policies applied on export performance are also apparent in the averages calculated for the various groups. Thus, the outward-oriented newly-industrializing countries experienced an average gain of 18 percent in export market shares, compared with a loss of 8 percent for the inward-oriented NICs. In turn, the outward-oriented and the inward-oriented less developed countries had gains of 18 percent and losses of 10 percent, respectively. Finally, in Sub-Saharan Africa, market-oriented countries had an average gain of 5 percent and interventionist countries an average loss of 19 percent. Using a three-fold classification scheme distinguishing among private market economies, intermediate, and étatist countries in Sub-Saharan Africa, the corresponding figures are +15, -10, and -24 percent (Table 7).

Table 4
Changes in Export Market Shares: The Newly Industrializing Countries

Country	Merchandise Exports		Traditional Agricultural Exports	
	1974-78	1979-81	1974-78	1979-81
Korea	153.4	167.4	-	-
Singapore	103.0	135.1	-	-
Taiwan	102.5	116.0	-	-
Chile	136.2	160.3	-	-
Uruguay	122.4	128.5	106.6	100.9
Argentina	99.3	93.7	96.8	92.0
Brazil	108.4	126.6	96.0	96.3
Israel	86.9	85.2	96.0	88.5
Mexico	79.1	92.2	78.3	68.9
Portugal	60.7	54.4	82.6	56.9
Turkey	91.6	103.8	78.1	73.7
Yugoslavia	91.1	87.2	67.1	39.6

Source: World Bank data tapes.

Note: The results show the ratio of a country's export market share in the period under consideration to its share in the base period. For 1974-78, the base period is 1971-73; for 1979-81, it is 1976-78.

The average ratio for merchandise exports has been derived as the weighted average of the ratios calculated for traditional primary exports, defined as accounting for more than 1.5 percent in total exports in 1971-73, for nontraditional primary exports, for fuel exports, and for manufactured exports For traditional agricultural exports, the average pertains to agricultural products within the traditional primary export group.

Tables 4 to 7 further provide information on the performance of individual countries and country groups in regard to traditional agricultural exports, defined as accounting for at least 1.5 percent of export value in 1971-73. 1/ The results confirm the findings pertaining to total merchandise exports.

Among outward-oriented newly-industrializing countries, only one country, Uruguay, had traditional agricultural exports in the 1971-73 period, and it experienced increases in export market shares during the 1974-78 period. In turn, all inward-oriented NICs lost market shares in their traditional agricultural exports, ranging from 3 percent in Argentina to 33 percent in Yugoslavia.

The less developed countries show a broadly similar pattern. Among outward-oriented LDCs, Kenya and Thailand made gains of 24 and 17 percent, respectively, Tunisia experienced no change, and only Mauritius had losses (11 percent). By contrast, apart from India's unchanged position, all inward-oriented LDCs lost export market shares, reaching 41 percent in the case of Egypt, where the appreciation of the real exchange rate was especially large.

Finally, apart from Mauritius, Niger, and Togo, private market economies in Sub-Saharan Africa increased their market shares of traditional agricultural exports; the largest gains were observed in Malawi (50 percent), the Ivory Coast (35 percent), Kenya (25 percent), and Botswana (21 percent). In turn, all interventionist countries lost export market shares, with a nearly two-thirds loss shown for Benin and over one-third in Ethiopia and

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1/ This represents a subgroup of the traditional primary exports referred to earlier. In turn, it was not possible to separate nontraditional agricultural exports from other primary exports in the data.

Table 5

Changes in Export Market Shares: Less Developed Countries

Country	Merchandise Exports		Traditional Agricultural Exports	
	1974-78	1979-81	1974-78	1979-81
Kenya	109.0	101.2	123.8	118.7
Mauritius	108.1	117.9	89.1	87.3
Thailand	121.0	145.6	116.5	123.7
Tunisia	114.3	142.3	100.0	80.3
India	91.0	62.6	100.7	90.4
Egypt	76.0	53.2	59.3	44.8
Jamaica	83.9	59.6	73.7	51.3
Morocco	85.2	86.7	77.6	61.3
Philippines	104.8	136.1	72.7	47.9
Peru	90.3	121.1	84.9	60.5
Tanzania	71.4	59.8	99.4	81.1
Zambia	87.4	77.9	-	-

Source: See Table 4

Note: Table 4

Zaire. As shown in Table 6, the differences are even more pronounced if private market economies and étatist countries are compared.

For groups of countries, data are available for all traditional primary exports that include nonagricultural products as well. As shown in Table 7, outward-oriented NICs had average gains of 24 percent, compared with losses of 10 percent for inward-oriented LDCs. Also, outward-oriented LDCs had gains of 14 percent while inward-oriented LDCs had losses of an equal magnitude. 1/

VI. Incentives and Export Performance: Country Experiences in the 1978-81 Period 2/

In the 1978-81 period, developing countries suffered the effects of the two-and-a-half fold increase in oil prices, the ensuing recession in the developed countries, and the rapid rise in world interest rates. At the same time, as shown in Tables 4 to 7, the export performance of these countries again reflected the policies applied. 3/

All outward-oriented newly-industrializing countries gained market shares in total merchandise exports, ranging from 16 to 67 percent. In turn, apart from Brazil, which provided substantial export incentives, and Turkey,

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1/ Comparable figures for groups of Sub-Saharan African countries are not available.

2/ The discussion draws on the material presented in Bela Balassa, "Adjustment Policies in Developing Countries: A Reassessment," World Development, September 1984, pp. 955-72. -- Comparable data for the 19 Sub-Saharan African countries are not available.

3/ The data relate to the ratio of average export market shares in the 1979-81 period to average shares in the 1976-78 period.

Table 6

Changes in Export Market Shares: Sub-Saharan African Countries

Country	Merchandise Exports 1974-78	Traditional Agricultural Exports 1974-78
Botswana	181.2	120.7
Cameroon	96.0	107.7
Ivory Coast	118.9	134.9
Mauritius	108.1	89.1
Kenya	109.0	123.8
Malawi	152.3	150.1
Niger	77.8	47.1
Togo	91.4	61.6
Upper Volta	121.9	102.0
Senegal	103.2	119.3
Sudan	83.6	90.3
Zaire	76.9	63.1
Benin	41.8	35.8
Ethiopia	60.2	60.2
Ghana	72.8	79.7
Madagascar	82.4	88.9
Mali	106.6	89.1
Tanzania	71.4	99.4
Zambia	87.4	-

Source: See Table 4

Note: Table 4

where important policy changes occurred in 1980, all inward-oriented NICs lost market shares, with Portugal showing the largest losses (46 percent).

The situation was similar in the case of the less developed countries. While outward-oriented LDCs gained export market shares, ranging from 1 to 45 percent, inward-oriented LDCs experienced losses of 13 to 47 percent, the exceptions being the Philippines and Peru. However, in the case of Peru, the discovery of oil reserves pushed the results into the plus column.

As far as country groups are concerned, the outward-oriented NICs and LDCs both increased their average market shares in merchandise exports by 37 percent. Conversely, inward-oriented NICs and LDCs experienced losses of 4 and 19 percent, respectively, although the results were improved by petroleum discoveries in Mexico in the first case and in Peru in the second.

All inward-oriented NICs lost market shares in traditional agricultural exports, ranging from 4 percent in Brazil to 40 percent in Yugoslavia. In turn, Uruguay, the only outward-oriented NIC with traditional agricultural exports, had a small gain.

Also, all inward-oriented LDCs lost market shares in their traditional agricultural exports, with Egypt (55 percent), the Philippines (52 percent), and Jamaica (49 percent) incurring the largest losses. As in the previous period, Kenya (19 percent), and Thailand (24 percent) made gains among outward-oriented LDCs while Mauritius (13 percent) and Tunisia (20 percent) experienced losses.

Finally, gains in market shares in traditional primary exports averaged 29 percent in outward-oriented NICs and 18 percent in outward-

Table 7

Changes in Export Market Shares: Country Groupings

Country Group	Merchandise Exports		Traditional Primary Exports	
	1974-78	1979-81	1974-78	1979-81
Outward-oriented NICs	118.3	137.2	124.4	129.0
Outward-oriented LDCs	117.5	137.3	114.1	118.0
Outward-oriented NICs and LDCs	118.2	137.2	119.6	123.5
Inward-oriented NICs	91.9	96.1	90.5	88.0
Inward-oriented LDCs	89.8	80.8	86.3	78.6
Inward-oriented NICs and LDCs	91.2	91.3	88.7	84.2

Source: See Table 4

Note: Table 4

oriented LDCs. Conversely, average losses were 12 percent in inward-oriented NICs and 21 percent in inward-oriented LDCs.

Conclusions

The findings of this paper indicate that exports in general, and agricultural exports in particular, strongly respond to price incentives. This conclusion has been established by an econometric analysis of data for developing countries and for a subset of Sub-Saharan African countries as well as by comparisons of the experience of countries at different levels of development and following different policies.

The econometric analysis shows the responsiveness of the exports of goods and nonfactor services, merchandise exports, and agricultural exports to changes in the real exchange. It is of particular interest to note that this response is apparently greater in Sub-Saharan African countries than in developing countries in general.

At the same time, the econometric estimates are subject to a downward bias, due in part to the use of ordinary least-squares (OLS) estimation techniques and in part to the absence of a lag structure in the estimates. Evidence on the downward-bias of OLS is provided in estimates for export demand and export supply functions for Greece and Korea. 1/

In turn, the country analyses indicate that outward-oriented countries had a far better export performance in regard to merchandise exports as well as traditional agricultural exports than inward-oriented economies.

1/ Bela Balassa, Evangelos Voloudakis, P. Fylaktos, and Suk-Tai Suh, "Export Incentives and Export Growth in Developing Countries: An Econometric Investigation," Washington, D.C., World Bank, Development Research Department, Discussion Paper No. 159, October 1985 (mimeo).

This conclusion applies to all the periods under consideration as well as to countries at different levels of development, from newly-industrializing developing countries to Sub-Saharan African countries.

The findings obtained by different methods of investigation thus complement and reinforce each other. At the same time, they disprove the oft-voiced views that agricultural exports and exports from countries at low levels of development would not respond to incentives.

BBD:BR-097:09/29/86

Red Exchange Rate

READER # 2
0078

Comments on "Economic Incentives and Agricultural Exports in Developing Countries"
(Bela Balassa, January 1986)

I. General Comments

1. In presenting the export supply model the author neglects both the discussion of the vast literature on export supply estimates and an analysis of what can be expected from theory with respect to the signs of the regression coefficients and the lag structure. He simply states that lagged variables yielded insignificant results and that they were therefore dropped, but does not discuss possible reasons. The statement that changes in international competitiveness may practically instantaneously result in shifts from domestic to foreign markets is not proven.

2. The regression results leave it open whether a revaluation in real terms resulted in a decrease of the export-output ratio or whether a devaluation in real terms caused an increase of the ratio. It seems that the author solely reflects on the latter movement but it is known from the experiences of the sixties and early seventies that especially many African countries revaluated in real terms.

3. As noted by the author on p. 12, there is the possibility that a basis effect of small export-output ratios (not only net export-output ratios) may distort the results because of large

changes in percentage terms. The use of absolute changes in export-output ratios would have reduced this source of distortion.

4. The author draws upon the distinction between exports of goods and services and merchandise exports. This distinction is rather meaningless as the author does not provide theoretical a priori considerations on the different degrees of responsiveness of both export bundles with respect to changes in real exchange rates. As he argues that exports of services are relatively inelastic he could have dropped the distinction.

5. It would have been more meaningful to distinguish between primary commodity-exporting countries and those diversifying towards manufactures. This point is essential as the relevant literature deals with the inelasticity of primary commodity exports vis-a-vis changes in real exchange rates and with the dilemma of developing countries faced with the "Dutch disease". In this connection the question is whether countries, which in the medium run improved the competitiveness of their manufactured exports by continuous real devaluations, experienced a shift from primary commodity exports to manufactures or rather did the elasticity pessimism materialize?

6. The results in table 1 are distorted by oil exports. This holds especially for Sub-Saharan Africa where the share of oil exports in total exports rose dramatically after 1973 and where primary commodities had higher shares in exports at the end of

the seventies than a decade earlier. Export/output ratio increases due to oil price jumps and other commodity price windfalls have nothing to do with changes in real exchange rates.

7. Sectoral shifts in the export composition of many developing countries are not explicitly discussed as a possible reason of increasing elasticities after 1973. The volatility of real exchange rates after 1973 is a further source of differences between regression coefficients before and after 1973. This volatility is not explicitly dealt with.

8. Sections IV-VI summarize what the author has analysed earlier in three books and articles respectively. The reader cannot guess with which weight the eleven countries are represented in the regression analysis. There is a clear break between these sections and sections I-III.

II. Specific Comments

1. Tropical beverages do not hold large shares in exports of Sub-Saharan Africa. Instead, coffee, cocoa and vegetable oil are the most important agricultural exports.

2. The author explains low elasticities by referring to quota regulations in commodity cartels (e.g. for coffee). This explanation holds for many merchandise exports in primary commodities (such as copper for Africa). In this respect the fact that Sub-Saharan African countries are primarily mineral commodity exporters (including oil) is neglected.

3. The fact that the overwhelming part of variances in the regression functions cannot be explained by the variables included (see low R^2) should have been given more attention than the statement of sufficient F-values.

A

one year rate of change
no lag
(continued)

	const.	e	Y^w	p	Y	N	F	$\bar{R}^2$
I. 1966–83								
net export/output	−0.03	0.42	−6.36	−1.36	2.35	408	0.47	−0.005
	(−0.03)	(0.20)	(−0.35)	(−0.91)	(0.97)			
	0.04	0.46	−7.90		2.59	408	0.35	−0.005
	(0.04)	(0.23)	(−0.44)		(0.92)			
II. 1955–82								
net export/output	−1.33	8.28	45.00	1.92	1.28	408	3.06	0.020
	(−2.09*)	(2.52*)	(2.13*)	(0.59)	(0.19)			
	−1.35	7.90	45.45		1.86	408	3.97	0.021
	(−2.14*)	(2.46*)	(2.15*)		(0.28)			
III. 1966–82								
net export/output	−0.68	4.89	14.03	−0.60	0.67	867	2.04	0.005
	(−1.54)	(2.33*)	(1.28)	(−0.33)	(0.19)			
	−0.67	4.97	13.71		0.56	867	2.69	0.006
	(−1.52)	(2.38*)	(1.26)		(0.16)			

Note: dependent variable takes very large values in this form.

THE WORLD BANK/INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

DATE March 17, 1986

PERSONAL

CONFIDENTIAL

TO Bela Balassa, VPERS

FROM Mark Leiserson, Managing Editor, WBER

EXTENSION 33483

SUBJECT WBER Editorial Board Action on Manuscripts Submitted for Publication

The Editorial Board of The World Bank Economic Review at its meeting on March 7 considered the two articles you had submitted for publication -- "Economic Incentives and Agricultural Exports in Developing Countries" and "Effects of Exchange Rate Changes in Developing Countries." I regret to inform you that the Board decided that neither was suitable for the Review.

I am attaching copies of comments on the articles received from referees which you may find useful for any revisions you might wish to undertake.

I deeply appreciate your letting us consider these articles. Despite the negative result on this occasion, I would like to look forward to future submissions from you with a more satisfactory outcome.

MWL:jbs

READER # 1
#0061

COMMENTS ON ECONOMIC INCENTIVES AND AGRICULTURAL EXPORTS IN DEVELOPING COUNTRIES

by Bela Balassa

With all due respect to the author, this is a sloppily done paper, ranging all the way from the title, which is not representative of the content of the paper, to the haphazard and careless way in which results from a number of studies are strung together to tell a not very impressive story. Along the way there are a number of undefined terms that create sufficient ambiguity so that those who believe will believe, while those who don't won't.

Regarding the title, a more descriptive one might be "Economic Incentives and Export Performance, with Special Reference to Agricultural Exports in the Developing Countries." There is almost as much in the paper on merchandise exports and exports of goods and services as there is on agricultural exports. Why not have the title represent the more generic material?

Related to that, the purpose of including the results with these two aggregates is never quite clear. This reviewer presumes that the intent is to show that these aggregates respond to incentives just as does agricultural exports and thus that the evidence from the larger aggregates supports that for agricultural exports per se. This story line is never developed, however, and the reader is left to wonder why he or she is asked to read so much about these two componets when the paper is presumably only about agricultural exports.

The paper is poorly motivated at the beginning. The reason or reasons why the empirical results to be presented are important is(are) hardly touched upon. Similarly, the way in which the results to be presented relate to the larger issue is also barely mentioned.

The more troublesome point about the paper arises in Sections IV, V, and VI. The main argument in these parts is that countries that turn inward with import-substituting policies don't have a very good export performance, while those that turn outward do. That should not be a very surprising result and one wonders why the author makes so much of it. Moreover, it isn't a particularly new finding.

This reviewer would have thought that the more interesting empirical question would be "What is the most efficient way of generating foreign exchange--by pursuing import substitution or by promoting exports?" That would be another paper, however. It would be useful if the author would at least recognize that this is an important and unanswered question from his analysis.

More detailed comments are as follows:

(1) Page 1, last paragraph: The author sweeps a lot under the rug. Rather than glorifying the price variable he concocts as something representing the price variable in an export

why not just call it a real exchange rate from the beginning--given that he eventually does in any case. After all, the real exchange rate is where the issues often focus in getting policy "right." Why not just explain how changes in the real exchange rate are expected to affect both the demand for and the supply of exports and go from there? Again, the price of traded goods relative to the price of non-traded goods is eventually abandoned. Why clutter the paper with it?

(2) Page 2, second paragraph: The basis for dividing the period into two sub-periods is not very well taken at all. The model whose parameters are to be estimated include explicitly both the real exchange rate and an income variable--presumably the economic forces he is trying to reflect in the two sub-periods. All this does for this reviewer--especially in light of the empirical results obtained--is to raise doubts about the overall specification of the model. A more legitimate justification for separation into two periods, in this reviewer's judgement, is that the first period was characterized by a fixed exchange rate regime while the second was characterized by a bloc-floating regime. This distinction is not even mentioned in the paper.

(3) How is foreign income involved in the model? In per capita terms--as the theory would specify? Or as an aggregate? The paper suffers from a great deal of this lack of precision.

(4) Are the variables transformed into logarithms for estimation purposes? Whether they are or not makes a difference in how they are interpreted. It would be nice to let the reader know.

(5) Similarly, it would be nice to advise the reader that the regressions are done with pooled data. He or she can figure that out from Table 1, but why should he or she have to look?

(6) The real exchange rate is only one component of international competitiveness. It is not very rigorous to imply that it is the whole thing, as is done in the third paragraph on page 3 and again in the first full paragraph on page 4.

(7) It would be useful to know what test was used to test for differences in parameters among equations. This can be done in different ways.

(8) There is a lot of speculation in the paper about why the coefficients are different in the two periods. Some of it is not persuasive, and hardly any of it is supported by any complementary data.

(9) The author might be a bit more candid about data problems. At least in the case of Africa, they are indeed quite serious.

(10) The last part of the paper is plagued with a large number of imprecisions. For example, in the third sentence of the third paragraph on page 16, reference is made to increased incentives. What is the content of that? Reduction in export barriers? A decline in the real exchange rate? Export subsidies? Subsidized credit for producers of export commodities? Similarly, there are such expressions as newly-industrializing countries, outward-oriented policies, inward-oriented policies, etc. These concepts may all communicate to the author and to this reviewer, but do they communicate to the reader the author really wants to reach?

(11) It is very difficult to know what the numbers in Tables 4-7 mean. The titles of the tables refer to market shares, but that's not what the footnote in Table 4 describes.

(12) Page 23: Imprecise concepts again: What are private market economies and international countries? This sloppiness puts the author in the same camp with those who sloppily argue that exports do not respond to prices and policies. This causes him to lose a lot of the weight of his arguments and evidence.

(13) Page 28, at top: In agriculture, a lot of the shift in resources takes place <u>within</u> the agricultural sector--between export commodities and those produced for the domestic markets. These shifts are usually fairly easy to make. In the longer run, there are shifts between agriculture and the rest of the economy. The author appears to be "reaching" here to justify what he has done.

(14) Page 28, first sentence of first full paragraph: While this sounds like a profound result, it is really rather trite.

$\frac{\text{exports (const.)}}{\text{GNP (const.)}}$

53 countries

	const.	e	Y^w	N	F	$\bar{R}^2$
I. 1966 - 73						
$\frac{\text{exports}}{\text{GNP}}$	-0.01	-0.04	0.62	424	0.58	-0.002
	(-0.38)	(-0.48)	(0.97)			
II. 1975 - 82						
$\frac{\text{exports}}{\text{GNP}}$	0.00	0.18	0.45	424	6.55	0.026
	(0.34)	(3.27)**	(1.33)			
III. 1966 - 82						
$\frac{\text{exports}}{\text{GNP}}$	-0.01	0.10	0.49	901	6.11	0.011
	(-0.59)	(2.39)*	(2.28)*			

rate of changes in exports of goods and NFS / GNP in constant prices
e : real effective exchange rate
Y^w : industrial countries' GNP in constant prices

△ 10%
* 5%
** 1%

dependent variable
Rate of changes in: total net exports / GNP

(51 countries)

	const.	e	Y^w	p	N	F	$\bar{R}^2$
I. 1966-73							
(a) total net exports / GNP	−0.84	−1.15	22.07	−1.05	408	0.48	−0.004
	(−0.82)	(−0.49)	(1.06)	(−0.42)			
(b)	−0.77	−1.20	20.65	—	408	0.63	−0.002
	(−0.76)	(−0.51)	(1.00)				
II. 1975-82							
(a)	0.17	−1.06	3.34	−4.54	408	0.27	−0.005
	(0.24)	(−0.29)	(0.14)	(−0.84)			
(b)	0.19	−1.12	2.46	—	408	0.05	−0.005
	(0.28)	(−0.31)	(0.10)				
III. 1966-82							
(a)	0.97	−0.90	−13.70	−1.39	867	0.42	−0.002
	(1.71△)	(−0.32)	(−0.94)	(−0.43)			
(b)	0.96	−0.97	−13.64	—	867	0.54	−0.001
	(1.69△)	(−0.35)	(−0.94)				

Note

△ 10%
* 5%
** 1%

Rate of changes in —
e = real effective exchange rate
Y^w = industrial countries' GNP in constant prices
p = (domestic) relative price traded goods / non-traded

dependent variable
Rate of changes in: industrial exports / industrial output

(51 countries)

	const.	e	Y^W	p	N	F	$\bar{R}^2$
I. 1966-73							
(a) industrial exports / industrial output	-0.10	0.73	4.17	-0.68	408	2.45	0.011
	(-0.53)	(1.76)Δ	(1.15)	(-1.89)Δ			
(b)	-0.08	0.68	3.78	—	408	1.88	0.004
	(-0.41)	(1.64)	(1.04)				
II. 1975-82							
(a)	-0.10	0.42	-0.75	-0.39	408	0.12	-0.007
	(-0.63)	(0.51)	(-0.14)	(-0.41)			
(b)	-0.10	0.35	-0.67	—	408	0.10	-0.004
	(-0.66)	(0.43)	(-0.13)				
III. 1966-82							
(a)	-0.11	0.45	3.23	-0.12	867	0.97	-0.000
	(-1.10)	(0.93)	(1.29)	(-0.29)			
(b)	-0.11	0.43	3.30	—	867	1.42	0.001
	(-1.15)	(0.90)	(1.33)				

Note

Δ 10%
* 5%
** 1%

Rate of changes in —
e : real effective exchange rate
Y^W : industrial countries' GNP in constant prices
p : (domestic) relative price industrial goods / non-industrial

dependent variable

Rate of changes in: net industrial exports / industrial output

(51 countries)

	const.	e	Y^w	p	N	F	$\bar{R}^2$
I. 1966-73							
(a) net industrial exports / industrial output	-0.81	1.03	20.21	2.47	408	1.30	0.002
	(-0.94)	(0.52)	(1.15)	(1.41)			
(b)	-0.89	1.21	21.63	—	408	0.95	-0.000
	(-1.03)	(0.61)	(1.24)				
II. 1975-82							
(a)	-0.11	0.12	-0.39	-0.77	408	0.36	-0.005
	(-0.94)	(0.18)	(-0.10)	(-1.04)			
(b)	-0.11	-0.02	-0.23	—	408	0.00	-0.005
	(-1.01)	(-0.03)	(-0.06)				
III. 1966-82							
(a)	0.07	-2.64	1.82	4.75	867	5.14	0.014
	(0.22)	(-1.82$^{\Delta}$)	(0.24)	(3.70**)			
(b)	0.20	-1.84	-1.11	—	867	0.85	-0.000
	(0.70)	(-1.27)	(-0.15)				

Note

$^{\Delta}$ 10%
* 5%
** 1%

Rate of changes in —
e = real effective exchange rate
Y^w = industrial countries' GNP in constant prices
p = (domestic) relative price industrial goods / non-industrial

A

one year rate of change
no lag

	const.	e	Y^w	p	Y	N	F	$\bar{R}^2$
I. 1966 – 73								
export/output	−0.07	0.55	2.09	−0.16	−0.08	408	4.55	0.034
	(−1.10)	(3.65**)	(1.58)	(−1.48)	(−0.37)			
	−0.07	0.55	1.90		−0.10	408	5.33	0.031
	(−0.99)	(3.68**)	(1.44)		(−0.47)			
import/output	−0.06	0.41	2.36	−0.16	0.10	408	2.50	0.015
	(−0.80)	(2.42*)	(1.59)	(−1.29)	(0.44)			
	−0.05	0.41	2.18		0.08	408	2.78	0.013
	(−0.70)	(2.45*)	(1.47)		(0.35)			
II. 1975 – 82								
export/output	−0.03	0.76	1.62	−0.01	−0.08	408	14.77	0.119
	(−1.39)	(7.00**)	(2.31*)	(−0.08)	(−0.34)			
	−0.03	0.76	1.61		−0.08	408	19.74	0.121
	(−1.39)	(7.17**)	(2.31*)		(−0.36)			
import/output	0.04	0.33	0.22	−0.54	−0.29	408	9.76	0.079
	(1.86△)	(2.83**)	(0.28)	(−4.55**)	(−1.22)			
	0.05	0.44	0.09		−0.45	408	5.82	0.034
	(2.14*)	(3.70**)	(0.12)		(−1.86△)			

KEYS
- e : real effective exchange rate
- Y^w : industrial countries' GNP
- p : relative price, agriculture / manufacturing
- Y : GNP of each country

- △ 10%
- * 5%
- ** 1%

one year rate of change
no lag
(continued)

	const.	e	Y^w	p	Y	N	F	$\bar{R}^2$
III. 1966 - 82								
export/output	-0.00	0.65	0.84	-0.17	-0.10	867	16.72	0.068
	(-0.20)	(7.20**)	(1.78△)	(-2.18*)	(-0.64)			
	-0.00	0.67	0.75		-0.13	867	20.61	0.064
	(-0.03)	(7.48**)	(1.59)		(-0.85)			
import/output	0.08	0.34	-0.18	-0.36	-0.11	867	7.92	0.031
	(3.50**)	(3.25**)	(-0.32)	(-4.04**)	(-0.64)			
	0.08	0.39	-0.37		-0.18	867	5.02	0.014
	(3.81**)	(3.70**)	(-0.68)		(-1.02)			

	Before Devaluation			After Devaluation					
	Three Year Average			Three Year Average a/			First Year		
Group Average	Exports	Imports	Exports − Imports	Exports	Imports	Exports − Imports	Exports	Imports	Exports − Imports
Group A	2.49	5.39	−2.90	14.62	10.46	4.16	12.26	5.60	6.66
Group B	6.80	6.68	0.12	10.40	10.77	−0.37	10.00	8.72	1.28
Group C	6.95	8.40	−1.45	13.69	11.32	2.37	12.81	9.03	8.78
Together	5.41	6.82	−1.41	12.90	10.85	2.05	13.36	7.98	5.58

a/ Two-year average for Group C

Real effective exchange rates.

DATA FOR SERIES PXR IMF DPD/ 91285

		1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
RXR612	ALGERIA	95.72	100.50	99.49	97.00	99.83	98.05	99.86	98.77	101.36	121.76	114.80	110.32
RXR213	ARGENTINA	70.29	74.22	113.23	108.14	104.65	104.59	97.54	106.58	95.88	92.59	141.00	92.73
RXR218	BOLIVIA	102.23	97.96	83.07	77.66	78.79	79.91	82.45	92.91	124.63	92.29	88.94	91.64
RXR223	BRAZIL	112.27	97.82	91.47	94.15	97.29	94.72	96.04	98.89	105.06	108.49	109.14	104.37
RXR518	BURMA	102.65	81.43	81.63	78.20	84.06	91.72	94.44	109.38	96.18	91.19	96.24	84.59
RXR622	CAMEROON	90.59	91.17	87.72	90.11	98.95	103.23	103.37	98.57	98.06	106.85	91.88	92.74
RXR626	CENTRAL AFRICAN REP.	92.97	94.21	89.16	85.51	92.54	102.01	100.10	96.06	103.84	112.85	90.81	95.31
RXR228	CHILE	89.55	94.57	96.09	99.10	99.32	102.67	95.55	96.06	108.39	87.63	92.51	81.22
RXR233	COLOMBIA	76.93	87.05	86.93	91.88	94.86	98.14	99.75	100.25	100.00	97.26	100.21	95.02
RXR634	CONGO	93.60	92.36	89.67	89.03	97.81	101.09	104.23	95.21	100.56	112.09	94.89	90.83
RXR238	COSTA RICA	108.58	110.70	107.36	103.30	102.20	100.79	98.16	100.05	101.79	104.29	100.84	97.68
RXR423	CYPRUS	88.28	90.30	90.84	96.27	96.63	96.97	101.63	101.91	96.46	95.47	96.77	102.77
RXR243	DOMINICAN REPUBLIC	95.05	97.66	96.69	97.85	100.20	100.41	99.99	99.56	100.44	105.65	100.60	96.73
RXR248	ECUADOR	85.33	82.53	79.10	75.83	73.59	85.06	98.23	98.81	102.96	100.64	95.20	85.22
RXR469	EGYPT	96.02	87.44	81.95	82.91	86.27	86.20	90.41	98.33	111.26	105.54	106.30	98.62
RXR253	EL SALVADOR	87.12	88.73	88.02	91.03	94.17	90.79	100.02	100.81	99.17	94.57	101.59	79.21
RXR644	ETHIOPIA	92.47	95.30	94.70	93.89	95.66	91.71	95.37	102.41	102.22	112.25	114.07	89.85
RXR652	GHANA	78.85	79.81	86.13	86.87	82.20	84.01	94.78	112.85	92.36	85.41	75.88	56.79
RXR174	GREECE	98.48	95.78	95.34	94.36	93.83	96.30	97.49	101.65	100.86	93.12	100.29	101.09
RXR336	GUYANA	79.76	80.57	79.53	85.62	87.51	88.88	92.72	101.15	106.13	113.46	124.23	124.02
RXR268	HONDURAS	91.54	92.36	92.00	89.11	90.28	93.64	95.48	96.92	107.59	113.64	116.95	116.12
RXR534	INDIA	78.19	95.44	98.59	97.50	98.91	98.21	98.02	99.59	102.39	99.96	108.53	120.64
RXR536	INDONESIA	150.23	121.53	104.50	96.01	90.60	92.80	100.60	104.54	94.86	77.50	76.31	69.07
RXR662	IVORY COAST	99.64	97.00	94.36	89.07	92.99	93.83	99.06	101.10	99.84	109.20	95.20	93.45
RXR343	JAMAICA	98.40	99.39	98.29	105.19	102.67	99.91	99.48	93.68	106.84	99.89	94.09	87.35
RXR664	KENYA	89.54	88.55	88.02	86.32	90.52	93.67	96.06	99.53	104.41	107.59	103.34	104.86
RXR542	KOREA	93.45	89.79	85.06	81.43	81.79	83.82	89.18	97.86	112.96	97.64	97.12	90.27
RXR668	LIBERIA	100.11	100.65	95.05	93.62	86.74	90.24	95.58	101.81	102.60	102.56	98.31	94.63
RXR678	MALI	124.15	127.46	119.25	98.54	102.07	104.71	101.62	96.45	101.93	121.03	102.71	101.80
RXR273	MEXICO	99.03	100.89	97.85	97.27	98.29	96.84	97.34	101.04	101.62	99.14	97.33	102.35
RXR686	MOROCCO	94.22	97.18	97.60	95.59	96.50	98.94	98.92	97.48	103.60	112.09	104.56	104.05
RXR278	NICARAGUA	96.94	98.11	97.21	94.85	96.59	98.21	100.06	103.61	96.33	102.23	103.05	107.06
RXR692	NIGER	104.41	97.18	96.21	97.95	96.60	105.02	104.12	97.96	97.93	121.40	107.67	94.87
RXR694	NIGERIA	128.28	120.47	125.10	122.62	114.84	106.27	97.14	96.14	106.71	107.83	87.26	71.89
RXR564	PAKISTAN	70.33	64.78	61.91	61.19	60.43	63.16	62.79	113.84	123.38	119.41	104.81	98.81
RXR283	PANAMA	96.04	98.52	97.99	97.54	99.42	100.14	98.55	97.80	103.65	95.17	91.08	88.01
RXR288	PARAGUAY	111.32	109.06	101.73	103.69	105.60	116.70	111.29	100.48	88.23	81.61	71.28	78.18
RXR293	PERU	97.38	91.51	93.07	100.19	97.27	97.42	95.87	97.53	106.60	109.26	98.78	106.56
RXR566	PHILIPPINES	81.08	79.77	78.60	77.29	78.42	100.07	97.70	101.43	100.87	82.71	88.70	83.15
RXR722	SENEGAL	91.64	91.81	92.47	91.97	96.57	102.60	101.78	99.07	99.15	108.69	80.09	87.09
RXR724	SIERRA LEONE	102.15	100.85	97.39	104.37	104.62	104.28	106.10	101.09	92.80	91.42	92.73	91.64
RXR726	SOMALIA	84.77	89.80	90.58	87.08	84.53	88.86	93.20	103.38	103.42	107.67	97.78	85.35
RXR524	SRI LANKA	84.82	87.16	88.08	100.26	96.60	95.33	98.10	94.03	107.87	119.44	133.39	149.72
RXR732	SUDAN	111.04	107.92	97.94	106.81	97.57	99.10	102.84	97.34	99.82	95.73	83.68	82.17
RXR463	SYRIAN ARAB REP.	108.68	101.56	93.84	96.47	100.57	97.63	92.82	108.49	98.69	103.07	103.33	96.53
RXR528	CODE - 528 *****	92.59	94.05	93.02	91.28	94.26	95.32	98.63	103.61	97.76	83.37	92.99	94.36
RXR738	TANZANIA	151.83	141.16	126.34	107.72	95.50	96.76	97.24	98.85	103.91	105.05	93.65	99.37
RXR578	THAILAND	102.30	91.75	86.49	91.00	90.13	94.21	97.66	101.03	101.31	94.41	95.68	95.10
RXR742	TOGO	92.37	93.99	95.71	94.45	96.68	102.84	101.08	96.36	102.56	116.73	95.82	95.82
RXR744	TUNISIA	109.53	108.02	103.91	99.68	102.41	102.24	98.72	99.10	102.18	105.33	95.82	99.98

Taiwan

DATA FOR SERIES RXR IMF DPD/ 91285

		1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
RXR186	TURKEY	82.49	79.98	76.02	72.71	70.94	91.49	107.79	95.44	96.76	88.03	90.58	87.31
RXR298	URUGUAY	112.38	129.20	115.47	112.67	106.87	99.69	90.20	111.58	98.22	91.66	104.30	109.20
RXR188	YUGOSLAVIA	52.60	86.99	84.46	83.93	84.43	82.80	90.81	103.37	105.81	96.40	94.89	93.57
RXR299	VENEZUELA	91.24	92.83	92.05	91.29	92.94	95.87	96.49	98.99	104.52	106.60	102.72	99.42

DATA FOR SERIES RXR IMF DPD/ 91285

		1977	1978	1979	1980	1981	1982
RXR186	TURKEY	86.52	90.04	80.61	106.41	104.41	117.34
RXR298	URUGUAY	108.33	107.69	92.13	85.64	78.46	81.95
RXR188	YUGOSLAVIA	94.17	102.65	106.67	121.34	109.73	122.20
RXR299	VENEZUELA	96.06	98.64	102.26	97.03	88.34	81.35

THE WORLD BANK/INTERNATIONAL FINANCE CORPORATION

OFFICE MEMORANDUM

DATE October 3, 1985

TO Messrs. Genberg and Swoboda

FROM Bela Balassa, VPERS

EXTENSION 3779

SUBJECT Comments on Your Paper

1. Your paper represents a serious effort to examine "The Medium-Term Relationship between Performance Indicators and Policy." At the same time, some questions arise concerning the underlying relationships.

2. As noted in my earlier comments on your outline, I miss an analysis of external shocks that affect your performance indicators. In fact, your equations do not include external variables, other than the terms of trade. Yet, in the period under consideration, world recessions, decreases in the demand for oil, and increases in world interest rates affected developing country economies. At the same time, the magnitude of these effects varied from country to country, depending on the share and the commodity composition of exports and the extent of foreign indebtedness.

3. In my paper, "Exports, Policy Choices, and Economic Growth in Developing Countries after the 1973 Oil Shock," published in the May-June 1985 issue of the Journal of Development Economics, I included the ratio of external shocks to GNP among variables affecting the rate of economic growth. The variable had the expected negative sign, although t-values were only in the 1.0-1.1 range. I would expect, however, that external shocks will have a stronger affect on exports and on the current account balance.

4. Further questions arise in connection with the role of the real exchange rate. You suggest that calculations of the real exchange rate, derived as changes in the nominal exchange rate adjusted for change in relative prices, should be taken as a proxy for the ratio of nontraded to traded goods prices (p. 40). However, these two indices have their distinct roles to play; while the former enters on the demand side as an indicator of international competitiveness, the latter appears on the supply side as an indicator of relative incentives. This is apparent in the following equations where I have followed you in including output capacity as a determinant of exports.

5. Denoting exports by X, domestic output by Y^d, world GNP by Y^W, the real exchange rate by R, and the ratio of traded to nontraded goods prices by P_T/P_{NT}, we get the following relationships:

$X^d = f(R, Y^W)\ X^s$

$X^s = g(P_T/P_{NT}, Y^d)$

6. I have used this model in a somewhat modified form to estimate the effects of the exchange rate on agricultural exports. In order to escape the problem of multicollinearity, due to the interactions of exports and output, I have used the ratio of agricultural exports to output as the dependent variable in the estimating equation. This means that the domestic relative price variable will be relevant only if exports and output are affected differently by changes in relative incentives. My results show that this has not been the case. Thus, while the real exchange rate variable has been highly significant statistically, and the world income variable moderately so, the domestic relative price variable has not been significant in any of the equations.

7. These results have established the effects of the real exchange rate on agricultural exports. You, however, suggest that the real exchange rate should be a relevant variable only "in the very short run when nominal prices are slow to adust" (p. 41). I question the validity of this proposition as my calculations show that the overvaluation of a currency may continue for a number of years and will affect export market shares for a long time.

8. It follows that you should introduce the real exchange rate in the export equation. In fact, the weakest part of the estimated model is the export equation that has a negative adjusted coefficient of determination. At the same time, in view of the evidence referred to above on export-output relationships, this equation is crucial for the understanding of the factors affecting developing country performance. Some suggestions follow.

9. You may wish to adopt my approach of taking the ratio of exports to output as the dependent variable. Also, world economic growth, or rather world demand for the country's principal exports would need to be introduced in the equation. This has been done in my work on policy responses to external shocks.

10. In turn, the export-output ratio should be included in the agricultural output equation where, incidentally, the causation will go from agricultural output to GNP rather than vice versa. In the same equation, relative domestic prices need to be introduced: this variable has been shown to be highly significant in recent work by Mundlak and others.

11. You may further consider using annual changes as I have done in estimating the agricultural equations, where they have given superior results to other formulations. This would also increase the numnber of observations that is rather small in the developing country equations, in view of the large number of variables you introduce. I would suggest

giving emphasis to the developing country sample, given differences in policy relationships, e.g. the Keynesian paradigm will have greater relevance for developed than for developing countries.

cc: Recipients of Paper.

BBalassa:nc

Hung up on a peg

Many developing countries are still letting their exchange rates become overvalued. The results are always bad, sometimes disastrous.

Industrial countries have been living with floating exchange rates since 1973. Developing countries have been more reluctant to expose their currencies to market forces: more than 40% of them still peg to one of the leading currencies. Since their inflation rates are rarely as low as those in America, Japan or Europe, their fixed exchange rates soon become overvalued.

Some poor countries respond by introducing tiers of exchange rates—one for trade, another for financial transactions and so on. Other countries feel driven to use more import controls. Usually, such measures only make local farmers and industry even more uncompetitive.

The charts show real effective exchange rates. These are a guide to trends in international competitiveness: a rise in the index means a loss of competitiveness. Two caveats. First, they take no account of the factors other than price which influence exports, such as quality and delivery dates. Second, price indices in many third-world countries are not a good guide to cost pressures.

In recent years, the exchange-rate policy of developing countries has been dominated by three factors:

- The unprecedented rise in the dollar, causing problems for those currencies still pegged to it.
- The need to correct current-account deficits. When real exchange rates rise, they cut profitability for the producers of traded goods, discouraging the expansion of exports and the production of import substitutes (including food). Overvalued exchange rates make all things foreign seem cheaper, including foreign bank loans, so countries have a beguiling way of financing their deficits.
- Concern over high and rising inflation. The faster inflation is, the more a currency needs to depreciate to maintain competitiveness. Where inflation is above 1,000%—eg, Bolivia—delaying a depreciation for even a few days can wipe out an exporter's profit margin.

The difficulties have been greatest in Latin America. Most real exchange rates there rose sharply up to 1981, followed by an equally dramatic fall. Several African and Middle Eastern currencies have also had big real rises. Asia has responded far better, and seen much smaller changes in competitiveness.

The differences are largely due to inflation rates. Several Latin American countries tried to slow inflation by tying their currency to the dollar, or only devaluing after a long lag. The dollar's strength plus Latin America's higher-than-average inflation caused their exchange rates to become massively overvalued. Once foreign bankers refused to finance current-account deficits, large devaluations were unavoidable. The real exchange rate of the Argentine peso soared 120% in the four years to 1981; two years later, after a string of devaluations, it was back to its 1977 level.

As a rule, countries which have maintained competitiveness have exported more and enjoyed faster growth. During 1975-84, the volume of exports rose by an annual average of more than 10% in Asia, but by only 5% in Latin America. Brazil is the odd-man-out in Latin America. Except in 1982, it has kept devaluing its exchange rate to preserve competitiveness and increased its export volume by 10% a year over the same period—twice the regional average. Last year, the volume of its exports rose by a quarter, and its economy started growing again, by about 4%.

Other comparisons between Latin America and Asia speak for themselves. Latin America's current-account deficit rose to 35% of its exports in 1982; in Asia it reached barely 10%. Foreign debt as a percentage of exports in 1984 was 290% for Latin America, only 85% for Asia. And when Latin America slumped after its debt trauma began, real gdp in Asia went on growing—by an average of about 6% a year since 1982.

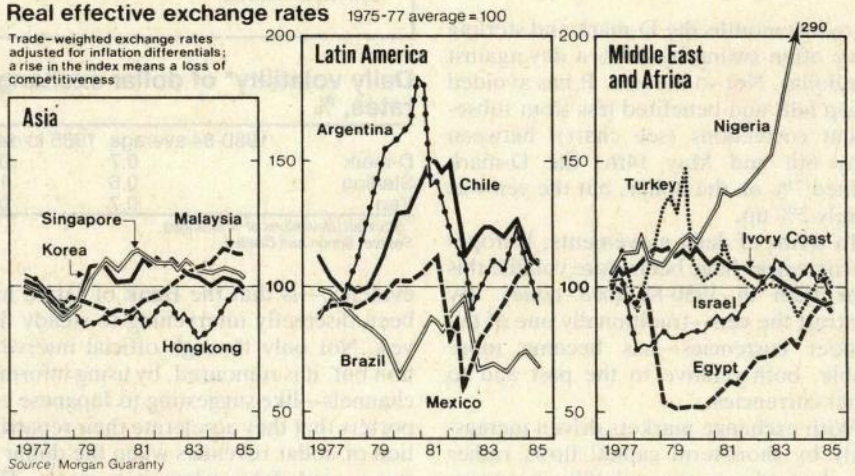
Turkey is a recent success story, after looking like a basket case seven years ago. Its exchange rate fell sharply in the mid-1970s, but not by enough to offset its rapid inflation. The real exchange rate of the Turkish lira rose by over 50% between 1975 and 1979. Gdp growth, which had averaged 8% a year in 1971-77, turned into a decline of ½% a year in 1978-80. The Turkish government changed course in early 1980, pushing the lira down. By 1984 the real exchange rate was below its 1975 level. The economy recovered in 1981, and has since grown by 4% a year.

The proportion of third-world currencies pegged to the dollar has fallen from 43% in 1976 to 27% in 1985 (see table). Of the currencies in our chart, three are still pegged to a single currency: the Hongkong dollar and the Egyptian pound to the dollar; and the Ivory Coast's CFA franc to the French franc. Automatic adjustment of exchange rates, according to indicators like relative inflation, has become popular in Latin America. Several Asian economies, such as Malaysia and Singapore, prefer to fix rates to a weighted basket of other currencies.

In some countries where the exchange rate is classified by the IMF as "managed floating", the emphasis tends to be on managed—or mismanaged—rather than floating. Nigeria's naira—long a bone of contention between its government and the IMF—has risen a disastrous 240% in real terms since 1975.

Real effective exchange rates 1975-77 average = 100

Trade-weighted exchange rates adjusted for inflation differentials; a rise in the index means a loss of competitiveness



Source: Morgan Guaranty

Developing countries' exchange rate arrangements

% of countries	1976	1981	Feb 1985
Pegged to a single currency	62.6	46.6	40.9
of which US$	(43.0)	(31.7)	(26.8)
Pegged to composite currency	23.4	26.7	29.9
Flexible arrangements	14.0	26.7	29.2
	100.0	100.0	100.0

Source: IMF

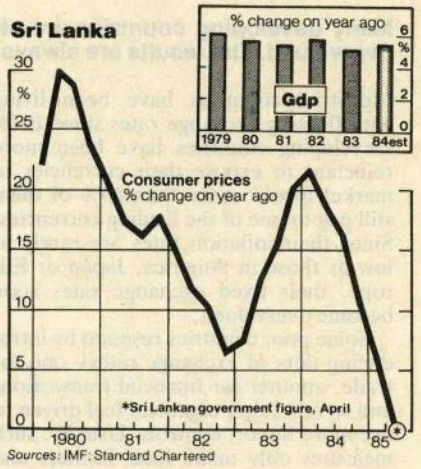
manufacturing investment increased in volume by about 18% in 1984, and the government forecasts a further 25% increase this year, the government agrees that the economy's longer-term prospects depend on bringing wages under control.

By threats and promises, Mr Feldt has persuaded the powerful trade union federation, the Landsorganisation, to accept a theoretical limit on wage increases this year of 5%. This limit is going to be breached. Most Swedish economists are forecasting that wage costs in 1985 will go 7-8% higher. This, though, would be lower than 1984's rise—and a basis, some hope, for a further reduction in 1986.

A better death

Few countries have ever stopped inflation; fewer still in the middle of a war. Sri Lanka has just done so, and not by government diktat. The consumer-price index last month was a whisker lower than in April, 1984. For a country sadly now better known for intercommunal fighting (see page 40), the slaying of inflation looks like a peaceful triumph.

Good harvests of tea, coconuts and rice have helped push down food prices, but the biggest contribution has come from tighter fiscal and monetary policies. Neither they nor the big loss of tourism revenue prevented gdp from growing by about 5½% last year. To cap it all, Sri Lanka's balance of payments has been improving fast. Foreign reserves have risen from $297m at the end of 1983 to $544m in March.



The yen

Held steady

In recent months the D-mark and sterling have often swung by 2-3% a day against the dollar. Not so the yen. It has avoided sharp falls and benefited less from subsequent corrections (see chart): between May 6th and May 14th, the D-mark gained 7% on the dollar, but the yen was barely 2% up.

In terms of daily movements, European currencies have been more volatile this year than in 1980-84 (see table). By contrast the yen—traditionally one of the friskier currencies—has become more stable, both relative to the past and to other currencies.

With exchange markets driven increasingly by short-term capital flows rather than by trade, greater volatility in currencies is not surprising. The split of opinion among experts about the dollar's next move—up or down?—has caused dealers to hold back. In a thin market, even modest deals can shift rates. So why has the yen not been yo-yoing?

The suspicion—backed by little hard evidence—is that the Bank of Japan has been discreetly intervening to steady the yen. Not only through official intervention but, it is rumoured, by using informal channels—like suggesting to Japanese exporters that they accelerate their repatriation of dollar revenues when the dollar is strong and delay when it is weak. The Bank's motive, apart from the desire to maintain stable exchange rates to assist Japanese industry, may be to stop the yen falling further and exacerbating trade rows. If this is really happening, some speculators may have decided that there is no money to be made on the yen's movements—thus reinforcing its stability.

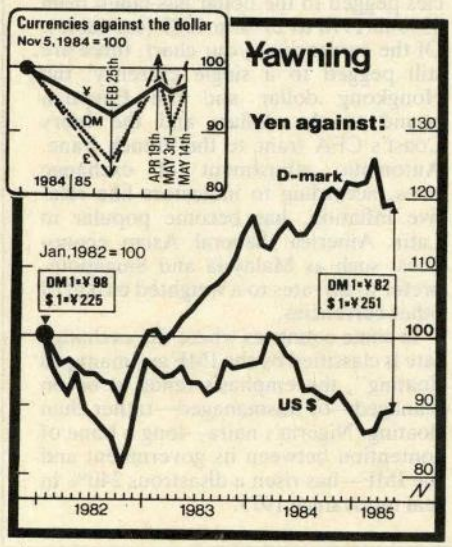
Since late 1982 the yen has made big gains against European currencies. It is up over 30% against the D-mark, even though the differential in real interest rates has shifted against Japan. The rise reflects underlying confidence in Japan's economy: low inflation; firm growth and a huge current-account surplus, expected to reach $45 billion this year.

The yen would be stronger still were it not for the insatiable appetite of Japanese investors for foreign assets. The gradual liberalisation of Japan's controlled and closed financial system should boost the attractiveness of yen assets, eventually reducing outflows and encouraging inflows. But, in the short term, liberalisation seems to be doing more to accelerate capital outflows, putting downward pressure on the yen.

Daily volatility* of dollar exchange rates, %

	1980-84 average	1985 to date
D-mark	0.7	0.9
Sterling	0.6	1.1
Yen	0.7	0.5

Standard deviations of % changes.
Source: Simon and Coates.



The Philippines

Going for a song

MANILA

After four years of amassing vast businesses, and their equally large debts, the Philippines government is selling everything it can. With $26 billion of state debt, the government has bowed to pressure from the IMF and its 483 creditor-banks, and is cutting its losses.

Up and down the Philippines, mothballed and derelict factories stand in mute testimony to a decade of high-level muddle and corruption. Most of the 14 sugar mills built in the early years of the Marcos administration are bankrupt, and now in the hands of the government that guaranteed the foreign loans used to buy them. Coconut mills, also built at the urging of the government with loan-guarantees, now stand idle, worth little more than scrap. Cement plants, car factories and textile mills—all foreclosed by the government, which assumed their debts—are for sale at whatever price they will fetch.

The Development Bank of the Philippines (DBP) and the Philippine National Bank (PNP), the two largest state-creditors with over 100 billion pesos ($5.4 billion) of non- or under-performing assets, are offering for sale, at giveaway prices, everything from hotels to ships, aeroplanes and oil-rigs. Visiting bargain-

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Areas

- Real exchange rate vs. trade policy
- Desirable level of current account deficit
- Policy instruments (a) fiscal & monetary policy
to be used to (b) trade policy
generate a particular (c) price controls
real exchange rate (d) incomes policy
(e) nominal exchange rate

(f) [illegible]

(1) Capital flight — portfolio adjustment
(a) possibility of exchange controls ([illegible])
(b) interest rate
(c) expropriation risks

(2) Real exchange rate adjustment cannot be based on past changes in the real exchange rate

(3) How to [illegible] a [illegible] of a real exchange rate target (French-speaking Africa)

(4)

[illegible] [illegible]
Lal [illegible]
[illegible] [illegible]
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[illegible] [illegible]

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Guitián

Devaluation should be part of a policy package
- Exchange rates matter, but other things matter, too.
- Real exchange rate is an endogenous variable
- There is change in problem in looking at the situation before and after a devaluation. This fact tends to reduce belief in the effectiveness of the devaluation
- Compare what is and what would have happened in the absence of a devaluation
- Guitián's article in JIE 1976 shows the possibility of a decline in output. The relevant question is whether pre-devaluation output was sustainable
- Can you through nominal exchange rate action change the real exchange rate? Yes, if there are appropriate policies that accompany it
- NB. While the nominal exchange rate raises the price of traded goods, the effective rate will be affected as a result of the policies applied
- Was the real wage sustainable?
- Nominal exchange rate changes may be the escape valve for policy errors.