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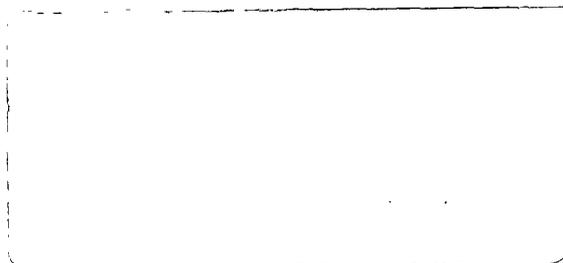
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The Newly-Industrializing Developing Countries After the Oil Crisis

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and the World Bank

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Abstract

This paper examines the experience of the newly-industrializing developing countries during the period following the quadrupling of oil prices in 1973-74 and the world recession of 1974-75. Developing countries with per capita incomes in excess of \$1100 in 1978 and a manufacturing share of 20 percent and higher in GDP in 1977 have been classified in this group. The investigation also covers Colombia that is on the borderline of becoming a newly-industrializing country and India that has an industrial sector larger than any developing country other than Brazil and Mexico.

The paper provides estimates of the balance-of-payments effects of external shocks, in the form of the deterioration of the terms of trade and the slowdown in world export demand, for twelve newly-industrializing countries. It further analyses policy responses to external shock in these countries and estimates the balance-of-payments effects of policy responses in the form of additional external borrowing, export promotion, import substitution, and reducing the rate of economic growth. Finally, the policies followed by the individual countries are evaluated in a comparative framework.

There is a high correlation between reliance on export promotion in response to external shocks and the rate of economic growth. This result reflects the success of countries that continued to follow outward-oriented policies (Korea, Singapore, and Taiwan) and those that newly adopted such policies (Chile and Uruguay) during the period under consideration. These countries had relatively low incremental capital-output ratios as they achieved more efficient resource allocation and more rapid technological change than their inward-looking counterparts, such as India.

The adoption of realistic exchange rates and interest rates also contributed to economic growth. Overvalued exchange rates adversely affected the growth of exports and output in Colombia, Israel, Mexico and Yugoslavia during much of the period under consideration. In turn, negative real interest rates appear to have had adverse effects on savings in Argentina, Brazil and Israel. Brazil also relied to a considerable extent on foreign borrowing, using the proceeds largely to increase consumption and to carry out investments in highly capital-intensive industries, whereas Yugoslavia utilized the proceeds of foreign borrowing to increase the rate of investment although the efficiency of some of these investments is open to doubt. For the group as a whole, reliance on foreign borrowing and the rate of economic growth are negatively correlated.

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AFTER THE OIL CRISIS

Bela Balassa*

October 29, 1980

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The author bears full responsibility for the opinions expressed in the paper; they should not be interpreted to reflect the views of the World Bank.

Introduction

In recent years, much attention has been given to the emergence of the newly-industrializing countries on the world scene.^{1/} The present paper will examine the experience of the newly-industrializing developing countries during the period following the quadrupling of oil prices in 1973-74 and the world recession of 1974-75. It will focus on the policy responses of these countries to external shocks and analyze the economic effects of the policies applied.

As an introduction to the discussion, Section I will briefly review the incentive policies followed by the newly-industrializing developing countries during the 1960-73 period and the effects of these policies on exports and on economic growth. Next, the methods employed to estimate the balance-of-payments effects of external shocks and of policy responses to these shocks will be described (Section II).

In Section III, estimates will be presented on the balance-of-payments effects of external shocks, in the form of the deterioration of the terms of trade and the slowdown of world demand for the exports of the newly-industrializing developing countries. Section IV will analyze policy responses to external shocks in the individual countries, including increased reliance on foreign financing, export promotion, import substitution, and lowering the rate of economic growth, and provide estimates on the balance-of-payments effects of these policies. In the conclusion, the policies followed by the newly-industrializing developing countries during the 1973-78 period will be evaluated in a comparative framework.

1/ Organization for Economic Co-operation and Development, *The Impact of the Newly Industrializing Countries on Production and Trade in Manufactures* Paris, OECD, 1979.

I. The Newly-Industrializing Developing Countries
in the 1960-73 Period

For purposes of the analysis, the newly-industrializing developing countries have been defined to include developing countries that had per capita incomes in excess of \$1100 in 1978 and where the share of the manufacturing sector in the gross domestic product was 20 percent or higher in 1977.^{1/} The countries in question are Argentina, Brazil, Chile, Mexico, and Uruguay in Latin America; Israel and Yugoslavia in the Europe-Middle East area; and Hong Kong, Korea, Singapore, and Taiwan in the Far East.

With the exception of Hong Kong and Uruguay, these countries were the subject of an earlier study by the author of incentive policies, exports, and economic performance which dealt with the period preceding the 1973 oil crisis.^{2/} The study also covered Colombia that is on the borderline of becoming a newly-industrializing country and India that has an industrial sector larger than any developing country other than Brazil and Mexico, which co-exists with a very large and backward agricultural sector.

For comparability with the earlier study, Colombia and India have been retained in the present investigation. Also, the earlier study has been

1/ The data have been derived from the World Bank, World Development Report 1979 (Washington, D.C., 1979), and World Atlas (Washington, D.C., 1979). -- The newly-industrializing developing country category overlaps with the upper ranges of the group of middle-income countries as defined in the World Development Report, that also includes newly-industrializing countries which are members of the OECD, the international economic organization of developed countries (Greece, Portugal, Spain, and Turkey).

2/ The findings of the study have been reported in the author's "Export Incentives and Export Performance in Developing Countries," Weltwirtschaftliches Archiv 114 (1979), 24-61; "Exports and Economic Growth: Further Evidence," Journal of Development Economics, 5 (1978), 181-89; and Development Strategies in Semi-industrial Countries, Baltimore, Md., The Johns Hopkins University Press, 1981, Chapter 3.

extended to include Uruguay but not Hong Kong that offers characteristics little different from those of Singapore, another city-state.

Correspondingly, the analysis of the pre-1973 and post-1973 periods in this paper will cover altogether twelve countries. In accordance with the scheme of classification applied in the earlier study, the countries have been divided into four groups on the basis of the policies applied in the period preceding the oil crisis.

The countries of the first group, Korea, Singapore, and Taiwan, adopted outward-oriented strategies, providing similar incentives to sales in domestic and in foreign markets, after the completion of the first stage of import substitution that entailed replacing the imports of nondurable consumer goods and their inputs by domestic production. The second group, Argentina, Brazil, Colombia, and Mexico, moved to the second stage of import substitution, involving the replacement of the imports of intermediate goods and producer and consumer durables by domestic production, but subsequently reformed their incentive system by reducing the bias against exports. In turn, the countries of the third group, Israel and Yugoslavia, started export promotion at an early date but their efforts slackened somewhat afterwards. Finally, India, Chile, and Uruguay, classified in the fourth group, continued to pursue inward-oriented strategies throughout the period preceding the 1973 oil crisis.

Incentives and Export Performance

The first group of Far Eastern countries established a free trade regime for exports and their domestic inputs. Some additional subsidies were also provided, equalizing the treatment of exports and import substitution in the manufacturing sector, without introducing substantial interindustry differences in export incentives. At the same time, there was little

discrimination against primary activities; incentives were granted by-and-large automatically; realistic exchange rates were established; and stability in the system of incentives was ensured over time.

The early application of outward-oriented policies explains that, in the 1960-66 period, the countries of the first group experienced more rapid increases in manufactured exports than any of the other nine countries and had the highest share of exports in manufacturing output. They also showed the best export performance in the 1966-73 period, when their export promotion efforts intensified. Increases in manufactured exports were accompanied by the rapid growth of primary exports, again surpassing all the other countries under consideration in 1960-66 as well as in 1966-73.

Unlike the first group, the second group of countries began their export-promoting efforts after having embarked on second-stage import substitution. They also differed from the first group in that, with few exceptions, the use of imported inputs in export production was limited to cases when comparable domestic products were not available. To compensate exporters for the resulting high costs, and for the effects of continued import protection on the exchange rate, the countries of the second group provided subsidies to nontraditional exports. Export subsidies lessened, but did not eliminate, the bias against exports, which remained particularly pronounced in the case of traditional primary products. And, while the adoption of the crawling peg imparted considerable stability to the system of incentives, incentives to value added continued to vary greatly among industries and several of the incentive measures were subject to discretionary decision making.

Within this group of Latin American countries, in the 1966-73 period manufactured export growth rates were the highest in Argentina and Brazil that introduced considerable export incentives in the mid-sixties. As a result,

between 1966 and 1973, the share of exports in manufactured output rose from 0.9 percent to 3.6 percent in Argentina and from 1.3 percent to 4.4 percent in Brazil. Nevertheless, this share remained substantially lower than in the countries of the first group; in 1973, Korea exported 40.5 percent, Singapore 42.6 percent, and Taiwan 49.9 percent of its manufacturing output.

Having extended to a considerable extent the scope of export-promoting measures in the mid-sixties, Colombia increased the share of exports in its manufacturing output from 3.0 percent in 1966 to 7.5 percent in 1973. The corresponding figures were 2.9 percent and 4.4 percent in Mexico that benefited from the proximity of the United States but, apart from the establishment of a free trade zone in the border area, did not provide export incentives until early 1971.

With continued discrimination against traditional primary exports, the four Latin American countries saw their world market shares dwindle in practically all of these commodities. Three of these countries, Argentina, Brazil, and Colombia, however, experienced gains in nontraditional primary exports that benefited from export subsidies, thereby raising the rate of growth of primary exports after 1966.

As a result of their early export promotion efforts, Israel and Yugoslavia surpassed the second group of countries, while falling behind the first, in terms of the share of exports in manufacturing output in 1966. But, as their export promotion efforts slackened, this share increased relatively little, from 12.8 percent to 14.1 percent in Israel and from 13.8 percent to 16.9 percent in Yugoslavia, between 1966 and 1973. In the same period, the share of exports in the increment of manufacturing output declined in Israel and hardly changed in Yugoslavia, Israel, however, gained in both traditional and nontraditional primary exports which suffered little discrimination while

smaller increases were observed in Yugoslavia where a bias against primary exports existed.

The fourth group of countries continued to apply an inward-oriented strategy, entailing considerable discrimination against primary as well as manufactured exports, during the period under consideration. As a result, they lost market shares in traditional primary exports, did poorly in nontraditional primary exports, and also suffered losses of market shares in manufactured exports. India's share in the combined exports of manufactured goods of the twelve countries under consideration decreased from 50.4 percent in 1960 to 31.0 percent in 1966 and to 10.7 percent in 1973; Chile's share declined from 1.9 percent to 1.5 percent and, again, to 0.5 percent; while Uruguay's share never reached 0.5 percent of the total.

Exports and the Growth of Output

Exportation provides advantages over import substitution by contributing to resource allocation according to comparative advantage, greater capacity utilization, the exploitation of economies of scale, and improvements in technology stimulated by competition in foreign markets. To the extent that exports give rise to more rapid increases in output than import substitution, the indirect effects of export growth, too, will be larger in countries where resources are not fully utilized.

These considerations explain that exports and output are highly correlated in an intercountry context. In the 1960-73 period, the Spearman rank correlation coefficient between the growth of exports and that of output was 0.67 for agriculture, 0.71 for manufacturing, and 0.89 for the national economy taken as a whole. In the same period, the coefficients obtained in correlating exports with output net of exports were 0.74 in the case of manufacturing and 0.77 for the gross national product, presumably reflecting

the indirect effects of exports.^{1/}

Alternatively, one may introduce exports, in addition to labor and (domestic and foreign) capital, as an explanatory variable in a regression equation designed to explain intercountry differences in GNP growth rates. The inclusion of exports in such a production function-type relationship reflects the assumption that outward-orientation enhances the productivity of labor and capital. In estimates made by pooling data for the 1960-66 and 1966-73 periods that were available for ten out of the twelve countries (excepting Singapore and Uruguay), adding the export variable to the regression equation raised the coefficient of determination from 0.58 to 0.77. The export variable was significant at the 1 percent level; all other variables (labor, domestic capital and foreign capital) were significant at the 5 percent level.

At the same time, the method applied tends to underestimate the effects of export growth on the growth of output by failing to account for the impact of exports on other variables in the equation. Yet, there is evidence that exports and domestic savings are positively correlated. Also, the improved balance-of-payments situation attendant on the expansion of exports increases the attractiveness of the country concerned for foreign capital.

II. Estimating the Balance-of-Payments Effects of External Shocks and of Policy Responses to these Shocks

The Analytical Framework

The world economic situation changed with the quadrupling of oil prices in 1973-74 and the world recession of 1974-75. In examining the policy

^{1/} All coefficients are significant at the one percent level. Results obtained by the use of alternative methods and for the subperiods 1960-65 and 1966-73 are reported in the publications cited above. Correlations for output net of exports have not been calculated in the case of agriculture. All the calculations exclude Uruguay.

responses of the newly-industrializing developing countries to these external shocks, the following analysis will consider reliance on foreign financing and the use of macroeconomic policy measures aimed at reducing the rate of economic growth, together with incentives to exports and to import substitution.

The balance-of-payments effects of external shocks in the form of the deterioration of the terms of trade and the slowdown of world demand for the exports of the newly-industrializing developing countries will be estimated by postulating a situation that would have obtained in the absence of external shocks. The same procedure will be applied in estimating the effects of policy responses to external shocks.

In developing the analytical framework, designed to estimate the effects of external shocks, and of policy responses to these shocks, the point of departure is the balance-of-payments identity. This is defined in terms of the resource gap that equals the deficit in merchandise trade, non-factor services and private transfers combined; the resource gap is financed by the net flow of external financing.

The resource gap is shown in equations (1) and (2) for years 0 and 1, respectively. In the equations, M and X denote merchandise imports and exports valued in base year (0) prices; P_{01}^m and P_{01}^x represent percentage changes in import and export prices between years 0 and 1; and S and R refer to the balance of non-factor services and private transfers and to the resource gap, respectively, valued in terms of current prices.

$$(1) \quad R_0 = M_0 - X_0 - S_0$$

$$(2) \quad R_1 = M_1(1+P_{01}^m) - X_1(1+P_{01}^x) - S_1$$

4. Taking the difference between equations (2) and (1) and rearranging

terms, we express changes in the resource gap between years 0 and 1 in equation (3) in terms of changes in import and export prices for the volume of imports and exports in period 1 ($P_{01}^m M_1 - P_{01}^x X_1$); changes in the volume of imports ($M_1 - M_0$); changes in the volume of exports ($X_1 - X_0$); and changes in the balance of non-factor services and private transfers ($S_1 - S_0$).

$$(3) \quad R_1 - R_0 = (P_{01}^m M_1 - P_{01}^x X_1) + (M_1 - M_0) - (X_1 - X_0) - (S_1 - S_0)$$

Equation (3) is modified if we examine the effects of policy actions taken at home and abroad. As a first step, we introduce hypothetical exports (X_1^h) that would be reached if the country in question maintained its base-period share in world markets. Now, differences between actual and hypothetical exports ($X_1 - X_1^h$), shown on the left-hand side of equation (4), are taken to have resulted from domestic policy actions as regards exports.

$$(4) \quad (R_1 - R_0) + (X_1 - X_1^h) = (P_{01}^m M_1 - P_{01}^x X_1) + (M_1 - M_0) - (X_1^h - X_0) - (S_1 - S_0)$$

Next, we introduce the effects of changes in foreign demand. For this purpose, we calculate the trend value of exports (X_1^t) on the assumptions that the trend of foreign export demand remained the same as in the base period and that the country under consideration maintained its export share unchanged. The difference between trend and hypothetical values ($X_1^t - X_1^h$), shown on the right-hand side of equation (5), thus represents the effects of the external shock due to changes in foreign demand for the country's export products. (Since this export shortfall adds to the deficit, it is shown with a positive sign.)

$$(5) \quad (R_1 - R_0) + (X_1 - X_1^h) = (P_{01}^m M_1 - P_{01}^x X_1) + (X_1^t - X_1^h) + (M_1 - M_0) - (X_1^t - X_0) - (S_1 - S_0)$$

In turn, hypothetical imports (M_1^h) are calculated for the actual growth

rate of GNP in the country concerned on the assumption that the income elasticity of import demand remained the same as in the base period. Differences between hypothetical imports (M_1^h) and actual imports (M_1), shown on the left-hand side of equation (6), are taken to reflect the effects of import-substituting policies.

$$(6) \quad (R_1 - R_0) + (X_1 - X_1^h) + (M_1^h - M_1) = (P_{01}^m M_1 - P_{01}^x X_1) \\ + (X_1^t - X_1^h) + (M_1^h - M_0) - (X_1^t - X_0) - (S_1 - S_0)$$

Furthermore, we calculate the trend value of imports on the assumptions that the income elasticity of import demand and the rate of growth of GNP remained the same as in the base period (i.e. no change in the rate of growth of imports). Differences between the trend value of imports and hypothetical imports ($M_1^t - M_1^h$), shown on the left-hand side of equation (7), are assumed to reflect the effects of changes in the rate of growth of GNP on imports.

$$(7) \quad (R_1 - R_0) + (X_1 - X_1^h) + (M_1^h - M_1) + (M_1^t - M_1^h) = (P_{01}^m M_1 - P_{01}^x X_1) \\ + (X_1^t - X_1^h) + (M_1^t - M_0) - (X_1^t - X_0) - (S_1 - S_0)$$

The difference between the trend values for imports and exports, adjusted for the actual balance of nonfactor services and private transfers, equals the amount of net external financing that would have been necessary in the absence of external shocks and policy reactions to these shocks (the trend value of the resource gap, R_1^t). In turn, the sum of the differences between trend values and actual values of imports and exports equals the difference between

the trend value of the resource gap and its actual value in the base year.

Introducing the trend value of the resource gap and rearranging terms, we show the excess of the actual resource gap over its trend value on the left-hand side of equation (8). This is taken to represent the additional inflow of external funds associated with the balance-of-payments effects of external shocks (additional net external financing).

$$(8) \quad (R_1 - R_1^t) + (X_1 - X_1^h) + (M_1^h - M_1) + (M_1^t - M_1^h) \\ = (P_{01}^m M_1 - P_{01}^x X_1) + (X_1^t - X_1^h) + (M_1^t - M_0) - (X_1^t - X_0) - (S_1 - S_0) - (R_1^t - R_0)$$

The last term on the right-hand side of equation (8) equals the sum of the previous three terms and indicates the amount of additional net external financing that would have been necessary in the absence of external shocks if past trends continued, over and above the inflow of external funds in the base year. The term is shown with a negative sign, so that the last four terms add up to zero and can be omitted.

Under the assumption that the country in question is a price-taker in world markets, the right-hand side of equation (8) is taken to indicate the effects of external shocks on the balance of payments. This is decomposed into effects on the terms of trade $(P_{01}^m M_1 - P_{01}^x X_1)$ and on export volume $(X_1^t - X_1^h)$. The former is further decomposed into a pure terms of trade effect calculated on the assumption of balanced trade in base year prices, $(P_{01}^m - P_{01}^x) X_1$, and the effects of increased import prices on unbalanced trade, $(M_1 - X_1) P_{01}^m$.

In turn, the left-hand side of equation (8) consists of terms representing policy responses to external shocks, including additional net

external financing ($R_1 - R_1^t$), increases in the country's export share in world markets ($X_1 - X_1^h$), import substitution ($M_1^h - M_1$), and the effects of lower GNP growth rates on the country's imports ($M_1^t - M_1^h$).

In the case of manufactured exports, the effects of lower growth rates of GNP abroad and the effects of changes in the foreign income elasticity of demand for these exports have further been distinguished. This has involved calculating the constant-income-elasticity exports of manufactured goods from developing countries to developed countries, developing countries, and centrally planned economies that would have been obtained if the income elasticities of import demand in the base period were combined with the actual GNP growth rates (X_{m1}^c).

Assuming further that the country in question maintained its share in the manufactured exports of the developing countries unchanged, the difference between the trend value of manufactured exports and the constant-income-elasticity exports of manufactured goods ($X_{m1}^t - X_{m1}^c$) is taken to reflect the effects of changes in GNP growth rates abroad. In turn, the difference between constant-income-elasticity exports and hypothetical exports ($X_{m1}^c - X_{m1}^h$) represents the effects of changes in foreign income elasticities of demand for the manufactured exports of the developing countries. Again, a positive sign denotes an export shortfall.

Estimating the Effects of External Shocks

In the practical application of the analytical framework, the average for the years 1971-73 has been taken as the basis for estimating terms of trade effects. It may be objected that, due to the effects of the world boom of 1972-73, the terms of trade of the developing countries were particularly favorable in 1971-73. However, the differences as compared to the nineteen-sixties are small, and the terms of trade of the developing countries in 1971-

73 were in fact slightly less favorable than in the nineteen-sixties^{1/} if we exclude fuel, the price of which started to rise in late 1973.

Changes in the terms of trade as compared to the 1971-73 base period have been attributed to external shocks. The underlying assumption is that the country in question is a price-taker in world markets. Such an assumption applies grosso modo to the principal exports of the countries under study, the principal exception being coffee in Brazil and in Colombia. Nevertheless, in the absence of the explicit modelling of the world coffee market, the assumption has been retained in this case also.

Terms of trade effects have been decomposed into a pure terms of trade effect, calculated on the assumption of balanced trade in terms of "1972" prices, and the effects of the rise in import prices on unbalanced trade (the deficit or surplus in the balance of merchandise trade) expressed in "1972" prices. In the event of unbalanced trade, then, the expressed terms of trade effects include the impact of increases in import prices on the trade deficit (surplus). This estimate reflects the assumption that, in the absence of external shocks, import prices would have remained unchanged during the period under consideration. The assumption of unchanged import prices has the following rationale.

While primary product prices were rising rapidly during the 1971-73 world boom, historical experience indicates that such price increases were followed by a decline or, at the least, by a flat price trend. Primary product prices, in turn, influence the prices of manufactured goods and it may not be

1/ The index numbers reported in United Nations, Monthly Bulletin of Statistics (December 1971 and June 1977) are 103 including, and 93 excluding, fuels in 1971-73 on a 1970 basis; the comparable averages for the 1961-70 period are 101 and 98 respectively.

unreasonable to assume that the world economy would have experienced a return to the noninflationary situation of the nineteen-sixties if the quadrupling of petroleum prices did not occur. At any rate, the rapid rise in petroleum prices accounts for a substantial part of the increase in import prices during this period.

In order to indicate the impact of the quadrupling of petroleum prices on the terms of trade, the balance of payments effects of changes in the prices of fuel and nonfuel imports are separately shown. On the export side, distinction has been made between traditional primary exports^{1/}, taken individually, fuels, nontraditional primary exports other than fuels, and manufactured goods.

The trend value of exports that would have occurred in the absence of external shocks has been estimated on the assumptions that the world exports of the country's traditional primary export products, taken individually, and the developing countries' exports of fuels, nontraditional primary products other than fuels, and manufactured goods grew at the same rate as in the 1963-73 period and that the country concerned maintained its "1972" market share in these exports. The underlying assumption is that a developing country competes against all suppliers in the world market for its traditional primary exports while its nontraditional exports compete against those of other developing countries.

The effects of changes in foreign demand in the country's exports have been derived as the difference between trend and hypothetical values of

^{1/} Traditional exports have been defined to include commodities that accounted for at least 1.5 percent of the country's merchandise exports in the years 1971-73, on the average. Manufactured goods have been defined as SITC categories 5 to 8 less 68; fuels as SITC category 3; nontraditional primary exports other than fuels include the remainder.

exports, both expressed in "1972" prices. Hypothetical exports have been estimated on the assumptions that the country's exports of traditional primary products rose at the same rate as world exports and that its exports of fuels, nontraditional primary products other than fuels, and manufactured goods increased at the same rate as developing country exports, from a "1972" basis. It thus again reflects the assumption that the country maintained its "1972" market share during the period under consideration.

Estimating the Effects of Policy Responses to External Shocks

Among policy measures taken in response to external shocks, the amount of additional net external financing has been estimated as the difference between the actual resource gap or net external financing and the trend value of the resource gap. The latter has been calculated on the assumption that the country's imports and exports, expressed in "1972" prices, rose at the same rate as in the 1963-73 period, taking further the actual net balance of nonfactor services and private transfers as a datum. In turn, total external financing has been defined as the sum of actual net external financing, interest payments, and dividends.

The effects of export promotion have been represented by increases (decreases) in exports, expressed in "1972" prices, that were associated with changes in the country's "1972" market shares. Separate calculations have been made for traditional primary products, taken individually, fuels, nontraditional primary products other than fuels, and manufactured goods.

Import substitution has been defined as savings in imports associated with a decrease in the country's income elasticity of import demand as compared to the 1963-73 period, again expressed in "1972" prices. Separate calculations have been made for fuel and for nonfuel imports.

The effects on imports of lower economic growth rates in the country

concerned have been derived by applying income elasticities of import demand for the 1963-73 period to GNP growth rates observed in the 1963-73 period and to actual GNP growth rates during the period under consideration. Again, separate calculations have been made for fuel and for nonfuel imports.

It should be noted, however, that changes in export market shares and in the rate of economic growth may have been due to circumstances outside the country's control. A decrease (increase) in the country's export market share may have occurred because of an acceleration (deceleration) of the growth of exports by competing suppliers. In turn, a fall in foreign demand for the country's export products may have contributed to a decline in its rate of economic growth.

Changes in export market shares, in import demand, and in the rate of economic growth may also have been due to internal events. In particular, domestic policy changes may have occurred independently of external shocks and may themselves constitute an "internal" shock. The methodology applied does not permit separating the balance-of-payments effects of policy changes taken in response to external shocks from the effects of autonomous domestic policy changes; such distinctions become a matter of interpretation.

The estimates reported in this paper have been made for the years 1974 to 1978, taken individually.^{1/} Averages for the 1974-78 period are also shown. This permits considering changes over time and indicating the results for the entire period.

III. The Balance-of-Payments Effects of External Shocks

This section will present empirical evidence on the balance-of-payments

^{1/} Estimates of balance-of-payments effects pertaining to individual years are shown on a "1972" basis. Changes between individual years can be derived as the difference between the reported estimates for consecutive years.

impact of external shocks, in the form of terms of trade effects and export volume effects, in the twelve newly-industrializing developing countries. Under each heading, the discussion will proceed by separating countries into four groups according to the scheme of classification described in Section I. This will be followed by an comparative analysis of the relative importance of the sources of external shocks in the twelve countries.

Table 1A reports the estimated terms of trade effects and export volume effects on the balance of payments of the newly-industrializing developing countries; more detailed results are shown in Appendix Table 1 for the years 1974 to 1978, on the average. Table 1B relates terms of trade effects to the average of exports and imports (average trade) and to the gross national product, and export volume effects to exports and to the gross national product, all expressed in "1972" prices. Export volume effects are shown in a four commodity group breakdown in Appendix Table 2.^{1/}

Terms of Trade Effects

Among the first group of Far Eastern countries, Korea suffered the largest terms of trade loss in 1974, equivalent to one-half of the average value of its exports and imports. The quadrupling of petroleum prices accounted for two-thirds of this loss. Higher petroleum prices adversely affected also Taiwan, where the terms of trade loss equalled one-third of the average value of trade in 1974.

^{1/} More detailed estimates of the balance-of-payments effects of external shocks, and of policy responses to external shocks in three Latin American countries (Brazil, Mexico, and Uruguay) are contained in the author's "Policy Responses to External Shocks in Selected Latin American Countries," paper presented at the NBER/FIPE/BEER Conference on Trade Prospects Among the Americas: Latin American Export Diversification and the New Protectionism, held in Sao Paulo, Brazil on March 24-26, 1980. Detailed results for the other nine countries covered in the paper are available from the author.

TABLE 1A

BALANCE OF PAYMENTS EFFECTS OF EXTERNAL SHOCKS AND OF POLICY RESPONSES TO THESE SHOCKS
(\$ millions)

	1974	1975	1976	1977	1978	Average 1974-78	1974	1975	1976	1977	1978	Average 1974-78	1974	1975	1976	1977	1978	Average 1974-78	
BALANCE OF PAYMENTS EFFECTS																			
	ARGENTINA						BRAZIL						CHILE						
I. <u>External Shocks</u>																			
(1) Terms of Trade Effects	-180	-622	194	193	-524	61	3143	3306	2635	805	1977	2373	45	710	478	932	1130	659	
(2) Export Volume Effects	18	113	-59	38	54	33	168	529	341	787	793	523	-52	87	74	98	175	76	
(3) Together	-161	735	135	231	-470	94	3311	3835	2976	1592	2770	2897	7	797	552	1030	1304	735	
II. <u>Policy Responses</u>																			
(4) Additional Net External Financing	156	1523	-241	-732	-1680	-195	4568	2749	823	-2327	-1857	791	-563	225	-430	50	505	-43	
(5) Increase in Export Market Share	-209	-739	-386	565	327	-89	108	793	341	524	445	442	288	249	447	462	538	397	
(6) Import Substitution	90	32	710	350	631	363	-742	673	2335	3491	3945	1941	202	18	218	248	84	154	
(7) Effects of Lower GDP Growth Rate	-198	-81	52	49	252	15	-624	-381	-524	-95	237	-278	66	309	318	270	177	227	
(8) Together	-161	735	135	231	-470	94	3311	3835	2976	1592	2770	2897	-7	797	552	1030	1304	735	
	COLOMBIA						MEXICO						URUGUAY						
I. <u>External Shocks</u>																			
(1) Terms of Trade Effects	47	159	-139	-710	-511	-231	662	1073	525	-114	90	447	117	183	176	213	176	173	
(2) Export Volume Effects	62	101	82	230	205	136	95	247	179	363	402	257	31	31	10	11	18	20	
(3) Together	109	260	-58	-479	-306	-95	758	1320	704	249	492	705	148	214	186	224	194	193	
II. <u>Policy Responses</u>																			
(4) Additional Net External Financing	213	108	93	-227	122	62	1979	2508	1533	336	856	1442	121	196	71	161	135	137	
(5) Increase in Export Market Share	39	110	-126	-118	4	-18	-93	-235	-507	-301	148	-198	11	48	124	81	86	70	
(6) Import Substitution	-133	46	-23	-134	-417	-132	-1136	-1031	-533	-80	-813	-719	17	-18	8	11	16	7	
(7) Effects of Lower GDP Growth Rate	-10	4	-1	-1	-15	-6	8	78	211	293	302	178	-1	-11	-17	-29	-43	-20	
(8) Together	109	260	-58	-479	-306	-95	758	1320	704	249	492	705	148	214	186	224	194	193	
	INDIA						ISRAEL						YUGOSLAVIA						
I. <u>External Shocks</u>																			
(1) Terms of Trade Effects	1116	1919	872	396	962	1053	1054	1079	745	757	1116	950	1653	2009	1479	2387	2159	2009	
(2) Export Volume Effects	34	342	322	595	852	429	12	217	119	318	409	215	134	443	608	800	1247	646	
(3) Together	1150	2260	1194	991	1815	1482	1066	1296	864	1075	1525	1165	1787	2452	2087	3187	3765	2665	
II. <u>Policy Responses</u>																			
(4) Additional Net External Financing	1587	2529	994	1723	3128	1992	1209	952	362	338	459	664	2044	1817	518	1979	2072	1686	
(5) Increase in Export Market Share	-328	-79	1	-362	-677	-289	-278	-206	-321	-205	-161	-234	-321	-28	73	-580	-440	-259	
(6) Import Substitution	-173	-165	202	-302	-546	-197	49	282	287	86	180	177	-216	-28	573	933	1166	486	
(7) Effects of Lower GDP Growth Rate	63	-25	-3	-68	-91	-25	87	267	535	856	1047	558	279	691	923	855	968	743	
(8) Together	1150	2260	1194	991	1815	1482	1066	1296	864	1075	1525	1165	1787	2452	2087	3187	3765	2655	
	KOREA						SINGAPORE						TAIWAN						
I. <u>External Shocks</u>																			
(1) Terms of Trade Effects	1712	1806	1203	623	1247	1318	678	911	602	433	997	724	1200	836	191	-72	-348	363	
(2) Export Volume Effects	45	493	254	673	791	451	3	297	163	398	557	284	-14	581	237	813	992	522	
(3) Together	1757	2299	1456	1296	2038	1769	681	1208	765	832	1554	1008	1194	1416	428	742	644	885	
II. <u>Policy Responses</u>																			
(4) Additional Net External Financing	486	-296	-2141	-3291	-2906	-1630	1011	1042	587	139	630	682	1556	520	-987	-1499	-2955	-673	
(5) Increase in Export Market Share	445	934	1658	2211	2625	1575	211	-15	4	300	636	227	-343	-302	243	199	666	93	
(6) Import Substitution	795	1412	2272	3395	4082	2391	-742	-193	-402	-304	-524	-433	-509	107	-7	523	1432	309	
(7) Effects of Lower GDP Growth Rate	31	248	-333	-1019	-1762	-567	202	374	576	697	812	532	491	1093	1179	1520	1501	1157	
(8) Together	1757	2299	1456	1296	2038	1769	681	1208	765	832	1554	1008	1194	1416	428	742	644	885	

Sources: See Appendix Table 1
Gross National Product - World Bank data bank.

Note: Numbers may not add up due to rounding.

TABLE 1B

BALANCE OF PAYMENTS TO EFFECTS OF EXTERNAL SHOCKS AND OF POLICY RESPONSES TO THESE SHOCKS
(per cent)

	1974	1975	1976	1977	1978	1974-78	1974	1975	1976	1977	1978	1974-78	1974	1975	1976	1977	1978	1974-78	
	A R G E N T I N A						B R A Z I L						C H I L E						
I. External Shocks																			
(13) Terms of Trade Effects/Average Trade	+7.7	29.1	9.0	6.6	-19.3	2.5	49.0	52.2	43.2	13.6	31.3	38.2	3.9	65.2	41.6	76.6	80.0	54.8	
(14) Terms of Trade Effects/GNP	-0.4	1.3	0.4	0.4	-1.1	0.1	3.3	3.3	2.4	0.7	1.7	2.2	0.5	8.6	5.5	10.0	11.0	7.2	
(15) Export Volume Effects/Exports	0.8	5.7	-2.2	1.0	1.4	1.1	3.4	9.6	6.1	13.7	13.0	9.4	-3.6	6.5	4.6	5.9	10.1	4.9	
(16) Export Volume Effects/GNP	0.0	0.2	-0.1	0.1	0.1	0.1	0.2	0.5	0.3	0.7	0.7	0.5	-0.5	1.0	0.9	1.0	1.7	0.8	
(17) External Shocks/GNP	-0.3	1.5	0.3	0.5	-1.0	0.2	3.5	3.9	2.8	1.4	2.3	2.7	-0.1	9.6	6.4	11.0	12.7	8.0	
II. Policy Responses																			
(18) Net External Financing/Average Trade	6.7	71.2	-11.3	-25.1	-61.9	-8.0	71.3	43.4	13.5	-39.3	-29.4	12.7	-49.0	20.7	-37.5	4.1	35.7	-3.6	
(19) Net External Financing/GNP	0.3	3.2	-0.5	-1.5	-3.5	-0.4	4.8	2.8	0.8	-2.1	-1.6	0.7	-6.0	2.7	-5.0	5.0	4.9	-0.5	
(20) Increase in Export Shares/Export	-8.7	-37.8	-14.4	15.1	8.8	-3.0	2.2	14.4	6.1	9.1	7.3	7.9	19.8	18.7	27.9	27.9	31.3	25.5	
(21) Import Substitution/Imports	4.0	1.4	44.2	16.9	37.2	18.2	-9.3	9.5	35.5	57.3	60.4	28.3	24.0	2.1	31.4	31.9	7.6	18.1	
(22) Lower GNP Growth Effects/Imports	-8.7	-3.5	3.2	2.4	14.9	0.7	-7.9	-5.3	-8.0	-1.6	3.6	-4.0	7.9	36.1	45.7	34.7	16.1	26.7	
	C O L O M B I A						M E X I C O						U R U G U A Y						
I. External Shocks																			
(13) Terms of Trade Effects/Average Trade	4.4	15.5	-14.0	-69.1	-39.2	-21.3	21.5	35.6	18.9	-4.2	2.6	14.8	48.2	62.6	51.8	64.1	51.0	55.7	
(14) Terms of Trade Effects/GNP	0.4	1.2	-1.0	-5.1	-3.4	-1.7	1.3	2.0	1.0	-0.2	0.1	0.8	3.9	5.9	5.6	6.5	5.2	5.4	
(15) Export Volume Effects/Exports	6.2	9.3	8.7	26.2	18.4	13.5	5.3	14.6	10.6	18.9	15.5	13.3	12.6	10.5	2.5	2.9	4.6	5.9	
(16) Export Volume Effects/GNP	0.5	0.8	0.6	1.6	1.3	1.0	0.2	0.5	0.3	0.6	0.7	0.5	1.1	1.0	0.3	0.3	0.5	0.6	
(17) External Shocks/GNP	0.9	2.0	-0.4	-3.5	-2.0	-0.7	1.4	2.4	1.3	0.4	0.8	1.3	5.0	6.9	5.9	6.8	5.7	6.1	
II. Policy Responses																			
(18) Net External Financing/Average Trade	20.1	10.5	9.4	-22.1	9.3	5.7	64.3	83.3	55.2	12.4	24.4	47.8	50.0	66.9	21.0	48.4	39.0	44.0	
(19) Net External Financing/GNP	1.7	0.9	0.7	-1.6	0.8	0.5	3.8	4.6	2.8	0.6	1.4	2.6	4.1	6.3	2.2	4.9	3.9	4.3	
(20) Increase in Export Shares/Export	3.9	10.1	-13.4	-13.4	0.4	-1.8	-5.2	-13.9	-30.2	-15.6	5.7	-10.2	4.3	16.2	30.4	21.5	22.0	20.4	
(21) Import Substitution/Imports	-11.8	4.8	-2.2	-11.4	-28.0	-11.4	-26.1	-23.8	-13.8	-2.3	-18.4	-17.5	7.1	-6.4	2.8	3.7	5.4	2.4	
(22) Lower GNP Growth Effects/Imports	-0.9	-0.4	-0.1	-0.1	-1.0	-0.5	0.2	1.8	5.5	8.3	6.8	4.4	-0.3	-3.9	-6.2	-10.1	-14.1	-7.3	
	I N D I A						I S R A E L						Y U G O S L A V I A						
I. External Shocks																			
(13) Terms of Trade Effects/Average Trade	40.9	65.5	29.1	12.4	29.0	34.7	55.1	57.6	37.4	34.7	47.7	46.1	47.4	56.1	41.3	68.0	67.3	56.1	
(14) Terms of Trade Effects/GNP	1.8	2.8	1.3	0.5	1.2	1.5	11.1	11.0	7.7	7.8	11.0	9.7	5.3	6.4	4.5	6.7	6.7	5.9	
(15) Export Volume Effects/Exports	1.3	11.7	9.5	18.7	27.6	14.1	0.9	16.7	7.9	19.0	21.2	14.1	5.5	16.0	19.7	30.0	43.8	23.4	
(16) Export Volume Effects/GNP	0.1	0.5	0.5	0.8	1.1	0.6	0.1	2.2	1.2	3.3	4.0	2.2	0.4	1.4	1.8	2.2	3.3	1.9	
(17) External Shocks/GNP	1.9	3.3	1.7	1.3	2.3	2.1	11.2	13.2	8.9	11.1	15.0	11.9	5.7	7.8	6.3	8.9	10.0	7.8	
II. Policy Responses																			
(18) Net External Financing/Average Trade	58.1	86.3	33.2	53.8	94.3	65.6	63.2	50.9	18.2	15.5	19.6	32.2	58.6	50.7	14.5	56.4	55.4	47.1	
(19) Net External Financing/GNP	2.6	3.7	1.4	2.3	4.0	2.8	12.7	9.7	3.7	3.5	4.5	6.8	6.5	5.7	1.6	5.6	5.5	5.0	
(20) Increase in Export Shares/Export	-12.3	-2.7	0.0	-11.4	-21.9	-9.5	-22.6	-15.9	-21.4	-12.2	-8.4	-15.3	-13.1	-1.0	2.4	-21.8	-15.5	-9.4	
(21) Import Substitution/Imports	-6.2	-5.6	7.8	-9.1	-15.4	-6.5	1.9	11.5	11.6	3.2	6.5	6.8	-4.8	-0.6	14.1	21.4	25.1	11.0	
(22) Lower GNP Growth Effects/Imports	2.3	-0.9	-0.1	-2.1	-2.6	-0.8	3.3	10.9	21.6	31.9	38.0	21.6	6.2	15.7	22.6	19.6	20.9	16.9	
	K O R E A						S I N G A P O R E						T A I W A N						
I. External Shocks																			
(13) Terms of Trade Effects/Average Trade	51.8	50.6	25.6	11.3	18.4	27.6	16.8	23.5	13.8	9.2	18.6	16.1	31.9	23.4	4.0	-1.4	-6.0	7.9	
(14) Terms of Trade Effects/GNP	8.3	8.2	4.8	2.2	3.9	5.1	18.1	22.8	14.2	9.4	19.8	16.7	10.4	7.0	1.4	-0.5	-2.1	2.7	
(15) Export Volume Effects/Exports	1.5	14.6	5.3	12.5	12.6	9.9	0.1	0.1	4.8	10.4	12.7	8.0	-0.4	15.9	4.6	15.4	15.5	10.8	
(16) Export Volume Effects/GNP	0.2	2.2	1.0	2.4	2.5	1.8	0.1	7.4	3.8	8.6	11.0	6.6	-0.1	4.9	1.8	5.6	6.1	3.9	
(17) External Shocks/GNP	8.5	10.4	5.8	4.5	6.4	6.9	18.2	30.3	18.0	18.0	30.8	23.3	10.2	11.9	3.2	5.1	4.0	6.5	
II. Policy Responses																			
(18) Net External Financing/Average Trade	14.7	-8.3	-45.6	-60.0	-42.8	-34.2	24.4	26.9	13.5	2.9	11.8	15.2	41.1	14.6	-20.5	-30.1	-51.1	-14.7	
(19) Net External Financing/GNP	2.3	-1.3	-8.5	-11.5	-9.1	-6.3	27.0	26.1	13.8	3.0	12.5	15.8	13.3	4.4	-7.4	-10.4	-18.1	-5.0	
(20) Increase in Export Shares/Export	15.0	27.7	34.8	41.0	41.9	34.6	6.6	-0.5	0.1	7.8	14.5	6.4	-9.4	-8.3	4.7	3.8	10.4	1.9	
(21) Import Substitution/Imports	21.8	37.5	49.1	60.8	55.7	47.9	-14.6	-4.0	-7.6	-5.4	-8.3	-8.0	-13.0	3.1	-0.2	11.1	27.9	7.1	
(22) Lower GNP Growth Effects/Imports	0.8	6.6	-7.2	-18.3	-24.1	-11.4	4.0	7.8	10.9	12.4	12.9	9.8	12.5	31.4	26.6	32.4	29.2	26.7	

Sources: Table 1A and World Bank data bank.

In the same year, the terms of trade loss amounted to one-sixth of the average of exports and imports in Singapore, where the export value of petroleum products nearly equalled the import value of petroleum. Nevertheless, with the average value of trade exceeding its gross national product, the ratio of the terms of trade loss to GNP was the highest in Singapore; 18 percent in 1974. It was followed by Taiwan (10 percent) that also had a relatively high trade share and by Korea (8 percent).

In Korea and in Taiwan, the terms of trade improved in subsequent years when the rise of petroleum prices decelerated. In Korea, the terms of trade loss was equivalent to 4 percent of GNP in 1978, with the pure terms of trade effect accounting for two-thirds of the total. In Taiwan, the terms of trade effects turned positive in 1978 as the gain from higher import prices on its large trade surplus in terms of "1972" prices more than compensated for the loss due to the negative pure terms of trade effect. In turn, the unfavorable impact of higher import prices on its trade deficit was offset only in part by the favorable pure terms of trade effect in Singapore, resulting in a terms of trade loss equivalent to one-fifth of GNP in 1978.

In 1974, the terms of trade loss equalled one half of the average value of exports and imports in Brazil that was the only major petroleum importer in the second group of Latin American countries. The corresponding ratio was one-fifth in Mexico that experienced unfavorable trends in the prices of its traditional primary exports; it was 4 percent in Colombia and -8 percent in Argentina that gained from increases in cereal prices. Expressed as a proportion of GNP the terms of trade loss was 3 percent in Brazil, 1 percent in Mexico, and practically zero in Colombia and in Argentina.

Owing largely to increases in coffee prices, Brazil and Colombia experienced considerable improvements in their terms of trade in subsequent

years. By 1978, the terms of trade loss declined to 2 percent of GNP in Brazil, with the pure terms of trade effect accounting for three-fourth of the total, while Colombia had a terms of trade gain amounting to 3 percent of its GNP.

As a result of higher prices on its rising petroleum exports, Mexico's terms of trade loss disappeared by 1977, with the favorable pure terms of trade effect compensating for the adverse impact of higher import prices on the trade deficit. In turn, the favorable impact of higher import prices on its trade surplus slightly exceeded the unfavorable pure terms of trade effects in Argentina.

In the third group, Israel and Yugoslavia suffered the consequences of the quadrupling of petroleum prices that resulted in a terms of trade loss equivalent to one-half of the average value of their trade in 1974. Given differences in trade shares, the corresponding ratio with respect to GNP was 11 percent in Israel and 5 percent in Yugoslavia. These figures changed little in subsequent years. At the same time, in both countries, the effects of higher import prices on the trade deficit expressed in "1972" prices exceeded the pure terms of trade effect by a large margin.

The quadrupling of petroleum prices adversely affected the balance of payments of all three countries of the fourth group, although Chile benefited from high copper prices that continued during much of 1974. The terms of trade loss expressed as a proportion of average trade and the gross national product, respectively, was 48 percent and 4 percent in Uruguay, 41 percent and 2 percent in India, and 4 percent and 1 percent in Chile in 1974.

Subsequently, however, copper prices declined precipitously, leading to a terms of trade loss equivalent to 11 percent of Chile's GNP in 1978. In the same year, the fall in beef prices contributed to a terms of trade loss equal

to 5 percent of GNP in Uruguay. Finally, increases in tea prices contributed to a decline in India's terms of trade loss that amounted to one percent of GNP in 1978.

Export Volume Effects

Export volume effects were negligible in the first group of Far Eastern countries in 1974 as foreign demand continued to be strong during much of the year. These effects increased in subsequent years, however, with year-to-year changes paralleling the world business cycle. By 1978, the shortfall in exports due to the slow growth of world demand reached 13 to 16 percent of export value in the three countries. With differences in export shares, the ratio of the export shortfall to GNP was 11 percent in Singapore, 6 percent in Taiwan, and 3 percent in Korea in 1978.

A similar pattern was observed in Brazil, Colombia, and Mexico, with the export shortfall reaching 18 percent of the value of exports in Colombia, 16 percent in Mexico, and 13 percent in Brazil in 1978. Given the relatively low share of exports in the gross national product, the ratio of the export shortfall to GNP did not exceed one percent in any of the three countries, however. And, this ratio was practically zero in Argentina that benefited from the rise in world demand for beef and maize.

Israel followed the time pattern observed in the above mentioned countries, with the ratio of the export shortfall to export value exceeding 21 percent in 1978. In turn, the export shortfall rose uninterruptedly in Yugoslavia, reaching the highest level (44 percent of the value of exports) among all the countries under study in 1978, largely because of unfavorable developments in centrally planned economies whose 1978 imports from the developing countries were below the "1972" level. Finally, the export shortfall, expressed as a proportion of GNP, increased from practically nil in

1974 to 3 percent in Yugoslavia and to 4 percent in Israel in 1978.

India also exhibited the pattern observed in most other countries, with the ratio of the export shortfall to export value rising from 1 percent in 1974 to 28 percent in 1978, and that calculated with respect to GNP increasing from nil in 1974 to 1 percent in 1978. The pattern was similar in Chile, except that strong demand for copper gave rise to a gain in 1974; the export shortfall equalled 10 percent of Chile's exports and 2 percent of its GNP in 1978. By contrast, owing to the rise in world demand for beef and wool, the ratio of the export shortfall to export value declined from 12 percent in 1974 to 5 percent in 1978 in Uruguay, with a parallel decline shown with respect to GNP.

Terms of Trade vs. Export Volume Effects

The results indicate the relative importance of terms of trade effects in newly-industrializing developing countries that rely on imported petroleum. In 1974 and 1975, on the average, the ratio of the terms of trade loss to the export shortfall ranged between 4 and 6 in Taiwan, Singapore, Uruguay, Yugoslavia and Korea; it was between 8 and 10 in India, Brazil and Israel; and it reached 22 in Chile. The corresponding ratios for the remaining countries were 1 in Colombia, 3 in Argentina, and 5 in Mexico.

With the exception of Chile and Uruguay, the ratio of terms of trade effects to export volume effects declined during the period under consideration. For one thing, apart from Chile and Uruguay that experienced unfavorable changes in the prices of their principal traditional exports, there was a tendency for terms of trade losses as a percentage of GNP to decline over time due largely to the slowdown in the rise of petroleum prices. For another thing, export volume effects showed an increasing trend, with fluctuations around the trend paralleling the business cycle, except

that Uruguay benefited from increased world demand for beef and wool.

Still, terms of trade effects continued to exceed export volume effects by a considerable margin in all the petroleum importing countries other than India where increases in the price of tea reduced terms of trade losses towards the end of the period and Taiwan where high import prices on its trade surplus measured in "1972" prices gave rise to a terms of trade gain. In 1978, the ratio of these effects was 2 in Brazil, Korea, Singapore and Yugoslavia, and 3 in Israel; it was 6 in Chile, and 10 in Uruguay. In the same year, terms of trade effects were negative in Argentina and Colombia and practically nil in Mexico.

The results show the importance of the quadrupling in petroleum prices in 1973-74, the effects of which were fully felt by January 1974. They conflict with conventional wisdom that gives emphasis to the unfavorable effects of the world recession and the subsequent slow recovery in the developed countries on the balance of payments of the developing countries. Also, the results do not support the view that the exports of manufactured goods from the developing countries were adversely affected by increased protectionism in the developed countries.

Thus, data available in a geographical breakdown show an increase in the "apparent" income elasticity of demand for the imports of manufactured goods in the developed countries, calculated as the ratio of the rate of growth of their imports to that of the gross national product. For the period as a whole, increases in the income elasticity of demand offset one-fifth of the export shortfall due to lower GNP growth rates in the developed countries.

At the same time, in intra-LDC trade, the favorable effects of higher GNP growth rates and income elasticity of import demand cumulated, with favorable effects for countries, such as those of the second group, where a large share

of manufactured exports was sold in developing country markets. By contrast, in centrally planned economies, the decline in the income elasticity of demand aggravated the adverse effects of lower GNP growth rates, importantly contributing to the large export shortfall observed in Yugoslavia.

IV. The Policies Applied and their Balance-of-Payments Effects

Section III of the paper analyzed the impact of external shocks, in the form of terms of trade and export volume effects, on the balance of payments of the newly-industrializing developing countries classified into four groups. Section IV will examine the policies applied in the four groups of countries and indicate the balance-of-payments effects of these policies.

The balance-of-payments effects of the policies applied are shown in Table 1A while Table 1B relates the results to the volume of exports, imports, average trade, and the gross national product, as the case may be, all expressed in "1972" prices. More detailed estimates are shown in Appendix Tables 1 and 2. In turn, Table 2 provides information on the financing of the resource gap, Table 3 on nominal and real interest rates, the government budget and the money supply, Table 4 on nominal and real exchange rates vis-a-vis the U.S. dollar, Table 5 on debt service and the external debt, and Table 6 on expenditure shares, incremental capital-output ratios, and rates of economic growth.

Korea, Singapore, Taiwan

In 1974, the combined balance-of-payments effects of external shocks equalled 18 percent of the gross national product in Singapore, 10 percent in Taiwan, and 9 percent in Korea. The effects of these shocks increased in subsequent years in Singapore, reaching 31 percent of GNP in 1978. After a small increase in 1975, the ratio declined to 6 percent in Korea and to 4 percent in Taiwan in 1978.

Table 2

Financing the External Resource Gap
(in millions of current US\$)

	Average									Average									Average									
	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	
	A R G E N T I N A									B R A Z I L									C H I L E									
Interest Receipts	16	7	26	16	128	55	50	128	333	43	131	327	167	718	364	282	358	640	472	12	1	5	6	24	5	10	18	39
Interest Payments	-226	-279	-343	-283	-423	-467	-515	-500	-719	-374	-544	-908	-609	-1448	-1861	-2091	-2460	-3334	-2239	-100	-124	-114	-113	-286	-282	-320	-360	-454
Dividends	-46	-61	-77	-61	-36	-16	-25	-211	-324	-412	-310	-530	-417	-554	-532	-790	-1330	-1538	-949	-30	-25	0	-18	-8	-7	-2	-23	-30
Other Factor Payments	-33	-8	-33	-25	-59	-15	-5	-27	-143	8	8	10	9	-1	-75	-120	-33	-44	-55	-13	5	12	1	-26	-11	-47	-54	-34
Official Transfers	-3	-4	11	1	0	-1	-5	0	0	20	23	16	20	-2	-10	-4	5	3	-2	4	2	10	5	8	13	16	16	0
Direct Investment	11	10	10	10	10	0	0	82	273	536	570	1341	816	1268	1090	1212	1678	1880	1426	-66	-1	-5	-24	-557	50	-1	21	182
Portfolio Capital	-94	112	56	25	-78	203	-221	137	-503	1595	3115	2768	2493	5371	4956	6988	4540	9486	6268	134	342	470	316	761	257	167	776	1496
Errors and Omissions	29	40	69	46	26	4	486	324	297	-9	438	355	261	-64	-35	1024	-614	298	122	-109	0	-86	-65	-117	-19	-3	-33	-68
Changes in Reserves	444	65	-845	-112	-76	1080	-921	-1837	-2269	-683	-2431	-2307	-1740	989	1016	-2683	-495	-6646	-1164	239	130	-100	90	90	277	-333	-210	-720
Net External Financing	-98	-118	-1126	-382	-510	843	-1156	-1904	-3055	924	1000	1072	999	6277	4913	3818	1649	2745	3880	71	330	192	198	-111	283	-513	151	411
Total External Financing	370	220	-706	-38	-49	1326	-616	-1193	-2012	1710	1854	2510	2025	8279	7306	6699	5439	7617	7068	201	479	306	329	183	572	-191	534	895
	C O L O M B I A									M E X I C O									U R U G U A Y									
Interest Receipts	9	18	24	17	65	56	65	65	123	65	80	97	81	153	117	124	168	245	161	1	1	6	3	5	4	7	12	18
Interest Payments	-114	-135	-168	-139	-201	-250	-269	-252	-269	-309	-345	-513	-389	-806	-1094	-1675	-1978	-2550	-1621	-22	-25	-31	-26	-43	-71	-79	-77	-95
Dividends	-71	-70	-70	-70	-55	-68	-109	-86	-114	-359	-435	-581	-458	-794	-840	-666	-400	-480	-636	0	0	0	0	-4	-4	0	-2	0
Other Factor Payments	-32	-33	-25	-30	-23	-18	-17	-2	-3	133	149	157	146	182	186	253	260	279	232	-1	-1	-1	-1	-4	-5	-3	-10	-6
Official Transfers	31	24	23	26	32	17	13	6	15	7	10	8	8	22	27	27	16	18	22	8	8	7	8	17	5	0	0	4
Direct Investment	43	18	24	28	41	40	25	64	75	307	301	457	355	678	610	628	356	532	601	0	0	0	0	0	0	0	66	129
Portfolio Capital	303	228	123	218	231	142	171	-91	149	629	154	1524	769	3122	4872	5233	1616	2956	3560	102	40	20	54	160	165	160	238	-31
Errors and Omissions	90	103	69	87	-17	10	211	159	138	34	651	-411	91	-845	-1249	-3046	53	-557	-1129	-51	-62	-30	-48	-82	-38	-13	35	158
Changes in Reserves	1	-178	-161	-113	95	-112	-633	-586	-528	-134	-190	-154	-159	-79	-128	595	-375	-428	-93	13	-36	-27	-17	40	62	-73	-179	-129
Net External Financing	260	-25	-161	25	168	-183	-543	-723	-423	373	375	584	444	1633	2451	1473	84	15	1098	50	-75	-56	-27	89	118	-1	83	64
Total External Financing	445	180	77	234	424	135	-165	-385	-40	1041	1155	1678	1291	3233	4385	3814	2294	3045	3354	72	-50	-25	-1	136	193	78	165	139
	I N D I A									I S R A E L									Y U G O S L A V I A									
Interest Receipts	48	43	51	47	94	130	195	274	468	120	137	238	165	335	322	363	370	496	377	17	17	50	28	93	62	90	123	150
Interest Payments	-350	-350	-391	-364	-304	-386	-347	-413	-338	-177	-240	-334	-250	-526	-652	-663	-715	-939	-699	-147	-165	-222	-178	-285	-343	-364	-381	-455
Dividends	0	0	0	0	0	0	0	0	0	-29	-20	-42	-30	-53	-49	-38	-46	-48	-47	0	0	0	0	0	0	0	0	0
Other Factor Payments	8	10	13	10	45	79	-29	-67	0	-68	-114	-198	-127	-235	-242	-222	-193	-218	-222	0	0	0	0	0	0	0	0	0
Official Transfers	144	163	110	139	2094	194	401	394	993	240	344	1050	545	990	1062	1436	1277	1560	1253	-1	-1	14	4	1	-1	0	-1	0
Direct Investment	-1	3	-13	-4	-6	-11	-8	0	0	57	113	148	106	81	45	47	81	134	78	0	0	0	0	0	0	0	0	0
Portfolio Capital	757	275	482	505	-937	958	921	437	0	533	411	835	593	985	1901	1024	232	1345	1097	428	147	168	248	947	1067	900	1544	1267
Errors and Omissions	-95	-254	-42	-130	-298	-435	-296	-134	199	58	53	-4	36	-183	149	22	430	391	162	0	0	0	0	0	0	0	0	0
Changes in Reserves	-22	129	108	72	20	-362	-2214	-2425	-1692	-224	-519	-532	-425	815	197	-44	-237	-860	-26	-70	-566	-646	-427	243	-63	-1065	-11	-250
Net External Financing	489	19	318	275	716	147	-1377	-1934	-370	510	165	1161	612	2209	2673	1925	1199	1861	1973	227	-568	-636	-326	999	722	-439	1274	654
Total External Financing	839	369	709	639	1020	533	-1030	-1521	-32	716	425	1537	893	2788	3374	2626	1960	2848	2719	374	-403	-414	-148	1284	1065	-75	1655	1167
	K O R E A									S I N G A P O R E									T A I W A N									
Interest Receipts	23	21	41	28	82	47	70	134	282	83	96	137	105	182	211	208	273	383	251	40	46	111	66	164	149	154	212	376
Interest Payments	-109	-150	-192	-150	-294	-424	-480	-675	-968	-30	-128	-298	-132	-371	-295	-349	-374	-454	-369	-56	-24	-43	-41	-82	-142	-261	-313	-400
Dividends	-3	-25	-10	-13	-30	-25	-37	-51	-50	0	0	0	0	0	0	0	0	0	0	-21	-25	-49	-32	-65	-90	-61	-67	-75
Other Factor Payments	236	229	176	214	150	125	182	310	328	117	61	80	86	82	69	32	32	38	51	20	48	-2	22	11	11	-51	-19	-104
Official Transfers	63	50	36	50	67	67	152	53	38	11	4	11	9	1	0	-3	-3	-4	-2	2	2	-5	0	-2	-6	-1	-2	-7
Direct Investment	42	64	95	67	119	57	81	93	89	116	191	389	232	597	611	651	335	517	542	53	27	62	47	83	15	72	49	114
Portfolio Capital	741	425	509	558	1624	2398	1782	1305	2006	171	205	334	237	-99	-32	199	272	274	123	-162	-29	-485	-225	1019	552	266	-1080	1633
Errors and Omissions	26	21	45	31	107	-226	-232	-63	-227	755	451	262	489	902	433	152	180	630	459	-24	-25	-116	-55	13	-5	-243	-141	-135
Changes in Reserves	39	-141	-348	-150	171	-376	-1314	-1372	-720	-319	-337	-411	-356	-295	-408	-298	-313	-665	-396	-41	-514	-60	-205	-41	-12	-413	246	-6
Net External Financing	1058	494	352	635	1996	1643	204	-266	691	904	543	504	650	999	589	592	402	719	660	-189	-494	-587	-423	1100	472	-538	-1115	-1870
Total External Financing	1170	669	554	798	2320	2092	721	460	1709	934	671	802	802	1370	884	941	776	1173	1029	-112	-445	-495	-351	1247	704	-216	-735	-1395

Sources: International Monetary Fund, Balance of Payments Yearbook, International Financial Statistics, various issues.
Yugoslavian data from World Bank Report. For India, 1978/79 fiscal year was used for 1978, from World Bank Report.

Note: Total External Financing is the sum of net external financing, interest payments and dividends.

Table 3

Nominal and Real Interest Rates, the Government Budget and the Money Supply

	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	1971	1972	1973	"1972"	1974	1975	1976	1977	1978			
	A R G E N T I N A									B R A Z I L									C H I L E																				
Nominal Interest Rate ^{a/}	23.2	30.1	26.2	26.5	26.5	94.5	115.3	121.8	142.8	20.0	20.0	18.0	19.3	18.0	18.0	28.0	30.0	33.0	15.0	20.0	50.0	28.3	-	267.3	197.9	93.8	63.2												
Real Interest Rate ^{b/}	-11.3	-24.7	-17.3	-17.8	7.9	-33.9	-64.1	-11.1	-1.3	0.0	1.2	1.1	0.8	-8.6	-7.3	-10.7	-8.7	-3.3	-14.7	-51.1	-73.3	-46.4	-	-22.7	-4.5	1.1	16.5												
Government Revenue ^{c/}	6.6	5.7	5.2	5.8	6.0	3.9	5.3	6.2		9.8	10.5	10.7	10.3	10.8	9.6	10.8	10.6	10.4	18.2	15.9	16.9	17.0	24.3	18.9															
Government Expenditure ^{c/}	8.9	8.5	10.7	9.4	12.3	16.1	13.8	10.4		10.1	10.6	10.6	10.4	10.2	9.6	10.8	10.6	10.3	26.1	26.1	24.8	25.7	34.9	17.8															
Budget Surplus (Deficit) ^{c/}	-2.3	-2.8	-5.5	3.5	-6.3	-12.2	-8.5	-4.2		-0.2	-0.1	0.1	-0.1	0.6	0.0	0.0	0.0	0.1	-7.9	-10.2	-7.9	-8.7	-10.6	1.1															
Change in the Money Supply - Nominal ^{d/}	35.9	67.0	103.6	68.8	71.6	196.5	297.7	148.7	133.3	29.2	40.0	49.1	39.4	33.6	39.2	38.5	36.6	41.0	120.0	145.3	316.7	194.1	272.4	257.4	193.7	108.2	68.6												
- Real ^{b/}	-2.2	-5.5	32.7	8.3	46.4	0.8	-33.6	-0.3	-5.2	7.7	18.1	27.7	17.8	3.5	9.4	-3.3	-4.1	2.5	63.1	0.0	-25.8	12.4	-15.2	-24.8	-5.9	8.7	20.4												
	C O L O M B I A									M E X I C O									U R U G U A Y																				
Nominal Interest Rate ^{a/}	14.0	14.0	14.0	14.0	16.0	16.0	20.0	20.0	22.0	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5																					
Real Interest Rate ^{b/}	2.2	-3.7	-10.9	4.1	-14.7	-7.5	-2.4	-5.3	3.7	0.6	1.7	-8.8	-2.2	-14.7	-5.4	-14.6	-26.0	-9.7																					
Government Revenue ^{c/}	9.7	8.9	8.4	9.1	8.1	9.5	9.3	9.0	9.5	8.5	9.7	10.9	9.7	11.4	13.2	13.1	11.6	19.4			21.9		20.1	18.5	20.9	22.0	23.2												
Government Expenditure ^{c/}	10.5	10.9	9.4	10.3	9.0	9.8	8.5	8.1	8.8	9.3	11.6	14.1	11.7	15.0	16.7	16.5	14.9	24.1			23.1		23.8	22.9	23.1	22.9	23.6												
Budget Surplus (Deficit) ^{c/}	-0.8	-2.0	-1.0	-1.3	-0.9	-0.3	0.9	0.8	0.7	-0.8	-1.9	-3.2	-2.0	-3.6	-3.5	-3.4	-3.3	-4.7			-1.2		-3.7	-4.4	-2.2	-0.9	-0.4												
Change in the Money Supply - Nominal ^{d/}	11.9	27.1	30.7	23.2	17.8	20.1	34.7	30.4	25.0	7.6	17.9	22.4	16.0	20.7	21.4	29.1	26.0	31.1	53.9	46.9	80.0	60.3	64.2	64.0	66.1	38.1	79.7												
- Real ^{b/}	0.3	7.4	2.2	3.3	-13.4	-4.3	9.6	2.9	6.3	3.6	14.7	5.7	8.0	-1.5	9.9	5.6	-10.7	13.2	27.5	-22.6	-16.3	-3.8	-8.1	-4.8	10.3	-8.2	20.9												
	I N D I A									I S R A E L									Y U G O S L A V I A																				
Nominal Interest Rate ^{a/}	6.0	6.0	7.0	6.3	9.0	9.0	9.0	9.0	9.0	39.6	34.3	38.5	37.5	42.4	49.2	55.5	57.5		20.9	23.8	20.3	21.7	22.2	22.1	22.4	23.4													
Real Interest Rate ^{b/}	0.9	-3.3	-7.3	-3.2	-15.2	4.5	7.3	3.0	10.1	55.0	47.2	67.3	56.5	66.1	70.3	76.6	78.5		25.3	24.1	20.7	23.4	24.9	24.2	24.3	25.1													
Government Revenue ^{c/}	9.9	9.6	8.4	9.3	9.0	10.3	10.6	10.6		15.4	-12.9	-28.8	-19.0	-23.7	-21.1	-21.1	-21.0		-4.4	-0.3	-0.4	-1.7	-2.7	-2.1	-1.9	-1.7													
Government Expenditure ^{c/}	12.1	11.6	9.9	11.2	10.6	12.5	13.4	13.2		28.2	28.7	32.3	29.7	18.0	21.7	27.1	38.8	45.0	15.9	41.7	38.4	32.0	25.2	32.8	60.2	16.8	20.4												
Budget Surplus (Deficit) ^{c/}	-2.2	-2.0	-1.5	1.9	-1.6	-2.2	-2.8	2.6		-16.3	16.3	11.2	14.6	-22.1	-13.6	-2.8	0.2	-5.3	2.0	26.5	23.1	17.2	-3.8	8.9	51.2	5.8	12.7												
Change in the Money Supply - Nominal ^{d/}	13.6	12.8	16.9	14.4	10.2	9.3	24.9	16.8	21.6																														
- Real ^{b/}	8.1	2.9	-1.3	4.1	-14.3	4.8	22.9	10.4	22.9																														
	K O R E A									S I N G A P O R E									T A I W A N																				
Nominal Interest Rate ^{a/}	16.0	11.0	11.0	12.7	11.0	14.0	14.0	14.0	15.0	8.0	7.5	9.0	8.2	10.3	7.1	6.8	7.0	7.7	12.0	11.3	13.3	12.2	14.8	13.3	12.0	10.8	10.8												
Real Interest Rate ^{b/}	6.9	-2.4	3.8	2.8	-21.9	-9.9	1.7	4.6	3.0	6.0	5.3	-13.7	-0.8	-9.9	4.3	9.0	3.6	2.8	11.8	6.6	-7.7	3.6	-18.3	19.3	8.9	7.9	7.0												
Government Revenue ^{c/}	17.2	15.6	15.4	16.1	16.0	17.7	20.7	19.7	20.3	22.3	23.1	21.5	22.3	22.2	25.5	24.2	23.5	23.7																					
Government Expenditure ^{c/}	17.8	20.1	16.6	18.2	17.8	19.4	20.3	19.4	19.8	18.1	16.3	15.1	16.5	15.2	17.3	18.8	19.6	20.5																					
Budget Surplus (Deficit) ^{c/}	-0.6	-4.5	-1.2	-2.1	-1.8	-1.7	0.4	0.3	0.5	4.2	6.8	6.4	5.8	7.0	8.2	5.4	3.9	2.2																					
Change in the Money Supply - Nominal ^{d/}	16.4	45.1	40.6	34.1	29.5	25.0	30.7	40.7	24.9	7.9	35.5	10.4	17.9	8.6	21.5	15.2	10.3	11.7	24.6	37.9	49.3	37.3	7.0	26.9	23.1	29.1	34.1												
- Real ^{b/}	7.2	27.5	31.5	22.1	-8.9	-1.3	16.6	29.1	11.8	6.0	32.7	-12.7	8.7	-11.3	18.3	17.6	6.8	6.6	24.4	32.1	21.6	26.0	-23.9	33.6	19.7	25.7	29.5												

Source: International Monetary Fund, International Financial Statistics.

Notes: (a) Discount rate, except for countries noted below; (b) Deflated by the wholesale price index; (c) Expressed as a proportion of the gross national product. The data do not include grants, lending, and repayments; (d) Sum of private sector demand deposits and currency outside the banks (M1).

Argentina, nominal interest rate, Singapore and Uruguay, the prime rate and for Chile 30 day time deposits rates at commercial banks was used.

Table 4
Nominal and Real Exchange Rates, 1971-1978

	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	1971	1972	1973	"1972"	1974	1975	1976	1977	1978
A R G E N T I N A										B R A Z I L										C H I L E							
Exchange Rate, National Currency per US dollar	4.6	8.2	9.4	7.4	8.9	36.6	140.0	407.6	795.8	5.288	5.934	6.126	5.783	6.790	8.129	10.675	14.144	18.070	0.012	0.020	0.111	0.068	0.832	4.911	13.054	21.529	31.656
Index of Exchange Rates	62.2	110.8	127.0	100.0	120.3	494.6	1891.9	5508.2	10754.1	91.4	102.6	105.9	100.0	117.4	140.6	184.6	244.6	312.5	25.2	42.0	232.9	100.0	1746.0	10303.0	27386.0	45166.0	66411.0
Domestic Wholesale Price Index	53.8	95.1	143.5	100.0	171.2	503.4	3015.5	7520.9	18505.3	84.1	99.7	116.4	100.0	150.4	191.3	274.3	390.6	537.3	17.4	42.7	239.9	100.0	1054.0	5008.0	15623.0	29945.0	41938.0
Index of Relative Prices vis-a-vis the US	60.6	102.6	136.8	100.0	137.3	369.5	2117.2	4973.1	11368.9	90.6	103.1	106.4	100.0	115.7	134.6	184.3	247.6	316.4	18.7	44.0	218.5	100.0	808.0	3837.0	10471.0	18916.0	24554.0
Index of Real Exchange Rate vis-a-vis the US dollar	102.6	108.0	92.8	100.0	87.6	133.9	89.4	110.8	94.6	100.9	99.5	99.5	100.0	101.5	104.5	100.2	98.8	98.8	134.8	95.5	106.6	100.0	216.1	268.5	261.5	238.8	270.5
C O L O M B I A										M E X I C O										U R U G U A Y							
Exchange Rate, National Currency per US dollar	20.080	22.018	23.813	21.970	27.109	31.202	34.976	36.923	39.252	12.500	12.500	12.500	12.500	12.500	12.498	15.426	22.573	22.767	0.260	0.563	0.875	0.566	1.216	2.299	3.395	4.750	6.125
Index of Exchange Rates	91.4	100.2	108.4	100.0	123.4	142.0	159.2	160.1	178.7	100.0	100.0	100.0	100.0	100.0	100.0	123.4	180.6	182.1	45.9	99.5	154.6	100.0	214.8	406.2	599.8	839.2	1082.2
Domestic Wholesale Price Index	81.1	96.1	122.9	100.0	167.1	209.6	257.6	326.5	384.0	93.2	95.8	111.0	100.0	136.0	150.2	183.7	259.3	300.1	43.0	81.6	175.4	100.0	313.5	540.4	813.7	1223.2	1817.4
Index of Relative Prices vis-a-vis the US	87.7	99.7	112.6	100.0	128.9	147.9	173.9	207.5	226.8	100.3	98.7	101.1	100.0	104.2	105.4	123.3	163.8	176.1	47.8	86.9	165.3	100.0	248.6	391.9	564.5	799.2	1103.3
Index of Real Exchange Rate vis-a-vis the US dollar	104.2	100.5	96.3	100.0	95.7	96.0	91.5	77.2	78.8	99.7	101.3	98.9	100.0	96.0	94.9	100.1	110.3	103.4	96.0	114.5	93.5	100.0	86.4	103.6	106.3	105.0	98.1
I N D I A										I S R A E L										Y U G O S L A V I A							
Exchange Rate, National Currency per US dollar	7.501	7.594	7.742	7.612	8.102	8.376	8.960	8.739	8.193	0.373	0.420	0.420	0.404	0.450	0.639	0.798	1.046	1.747	14.958	17.000	16.189	16.049	15.913	17.386	18.193	18.298	18.644
Index of Exchange Rates	98.5	99.8	101.7	100.0	106.4	110.0	117.7	114.8	107.6	92.3	103.9	103.9	100.0	111.3	158.0	197.4	258.7	432.1	93.2	105.9	100.9	100.0	99.2	108.3	113.4	114.0	116.2
Domestic Wholesale Price Index	89.3	97.8	112.9	100.0	145.2	151.4	153.8	162.8	161.1	93.1	97.1	109.9	100.0	130.5	142.7	149.2	158.5	170.5	88.8	99.4	111.9	100.0	145.6	177.5	188.3	207.7	221.9
Index of Relative Prices vis-a-vis the US	96.0	100.7	102.8	100.0	111.3	106.2	103.1	102.8	94.3	94.4	100.1	105.4	100.0	134.2	172.9	216.4	282.3	401.8	95.5	102.5	101.9	100.0	111.7	124.6	126.3	131.3	130.3
Index of Real Exchange Rate vis-a-vis the US dollar	102.6	99.1	98.9	100.0	95.6	103.6	114.2	111.7	114.1	97.8	103.8	98.6	100.0	82.9	91.4	91.2	91.6	107.5	97.6	103.3	99.0	100.0	88.8	91.0	89.8	86.8	89.2
K O R E A										S I N G A P O R E										T A I W A N							
Exchange Rate, National Currency per US dollar	350.80	393.97	398.32	381.03	405.97	484.00	484.00	484.00	484.00	3.0478	2.8092	2.4436	2.7669	2.4369	2.3713	2.4708	2.4394	2.2740	40.000	40.033	38.263	39.432	38.000	38.000	38.000	38.000	37.054
Index of Exchange Rates	92.1	103.4	104.5	100.0	106.5	127.0	127.0	127.0	127.0	110.2	101.5	88.3	100.0	88.1	85.7	89.3	88.2	82.2	101.4	101.5	97.0	100.0	96.4	96.4	96.4	96.4	96.0
Domestic Wholesale Price Index	90.0	101.5	108.5	100.0	154.3	195.4	218.9	238.7	266.6	90.5	92.4	117.0	100.0	143.0	146.8	144.0	148.7	153.7	90.2	94.1	115.6	100.0	162.5	154.3	158.6	163.0	168.7
Index of Relative Prices vis-a-vis the US	96.7	104.5	98.8	100.0	118.2	137.0	146.7	150.6	156.3	97.6	95.5	106.8	100.0	110.0	103.2	96.8	94.1	91.7	97.3	97.3	105.6	100.0	124.9	108.6	106.7	103.3	99.3
Index of Real Exchange Rate vis-a-vis the US dollar	95.2	98.9	105.8	100.0	90.1	92.7	86.6	84.3	81.3	112.9	106.3	82.7	100.0	80.1	83.0	92.3	93.7	89.6	104.2	104.2	91.9	100.0	77.2	88.8	90.3	93.3	94.7

Source: International Monetary Fund, International Financial Statistics, various issues, World Bank Reports.

Note: For Chile and Singapore the Domestic Consumer Price Index was used.

Table 5
Debt Service and External Debt
(in US\$ millions, current prices)

	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	1971	1972	1973	"1972"	1974	1975	1976	1977	1978	
A R G E N T I N A										B R A Z I L										C H I L E								
Gross Debt Service	502	538	764	595	1000	1011	1223	1286	3161	1467	1962	2654	2021	3371	4031	5084	6511	8606	283	391	522	399	888	805	985	1153	1416	
Net Debt Service	486	531	718	578	872	956	1173	1156	2828	1624	1811	2327	1854	2653	3665	4802	6153	7966	271	390	517	393	864	800	975	1135	1377	
Merchandise Exports	1740	1941	3266	2316	3931	2961	3912	5642	6403	2904	3991	4199	4365	7951	8670	10128	12120	12659	961	855	1249	1022	2481	1552	2083	2190	2408	
Gross Debt Service Ratio	28.9	27.7	22.8	25.7	25.4	34.1	31.3	22.8	49.4	50.5	48.7	42.8	46.3	42.4	46.5	50.2	53.7	68.0	29.4	45.7	41.8	39.0	35.8	51.9	47.3	52.6	58.8	
Net Debt Service Ratio	27.9	27.4	22.0	25.0	22.2	30.3	20.5	44.2	49.0	49.0	45.4	37.5	42.5	33.4	42.3	47.4	50.8	62.9	28.2	45.6	41.4	38.4	34.8	51.5	46.8	51.8	57.2	
Gross External Debt			3323		3641	3450	5055	5890	7290	6622	9521	12572	9572	17165	21171	25985	32000	43500			4048		4774	5263	5195	5434	6911	
Net External Debt			2215		2406	3286	3970	2977	2143	4899	5338	6156	5465	11893	17135	19441	24744	31606			3964		4868	5540	5201	5315	6109	
Gross National Product	37907	43400	48130	43145	56115	60839	62947	70018	72752	64340	74871	90227	76479	108664	125212	143198	158556	180024	9275	9708	9851	9611	11398	10980	12010	13819	16442	
Gross External Debt Ratio			6.9		6.5	5.7	8.0	8.4	10.0	10.3	12.7	13.9	12.5	15.8	16.9	18.1	20.2	24.2			41.1		41.9	47.9	43.3	39.3	42.0	
Net External Debt Ratio			4.6		4.3	5.4	6.3	4.3	2.9	7.6	7.1	6.8	7.1	10.9	13.7	13.6	15.6	17.6			40.2		42.7	50.3	43.3	38.5	37.2	
C O L O M B I A										M E X I C O										U R U G U A Y								
Gross Debt Service	285	315	358	319	465	471	486	484	551	788	876	1390	1018	1398	1929	2933	4398	7040	46	71	106	74	63	138	140	149	207	
Net Debt Service	276	297	334	302	400	415	421	419	428	723	796	1293	937	1245	1812	2809	4230	6795	45	70	100	72	58	134	133	137	189	
Merchandise Exports	689	863	1176	909	1417	1465	1745	2443	3010	1363	1665	2071	1700	2850	2861	3316	4418	6217	206	214	322	247	382	384	547	608	688	
Gross Debt Service Ratio	41.4	36.5	30.4	35.1	32.8	32.2	27.9	19.8	18.3	57.8	52.6	67.1	59.9	49.1	67.4	88.4	99.5	113.2	22.3	33.2	32.9	30.1	26.6	35.9	25.6	24.5	30.1	
Net Debt Service Ratio	40.1	34.4	28.4	33.2	28.2	28.3	24.1	17.2	14.2	53.0	47.8	62.4	55.1	43.7	63.3	84.7	95.7	109.3	21.8	32.7	31.1	29.0	15.2	34.9	24.3	22.5	27.5	
Gross External Debt			2102		2370	2693	2806	3019	3361			8310		12389	17263	22000	25785	32622			369		557	667	750	791	866	
Net External Debt			1568		1921	2172	1648	1198	905			6955		10596	15724	20973	25366	30675			168		403	392	405	168	17	
Gross National Product	9447	10613	12078	10713	14124	16030	17615	19645	22993	41284	46102	52391	46592	60478	68624	73159	80402	91914	2823	2829	3027	2893	3430	3906	4212	4629	5157	
Gross External Debt Ratio			17.4		16.8	16.8	15.9	15.4	14.6			15.9		20.5	25.2	30.1	33.3	35.5			12.2		16.2	17.1	17.8	17.1	16.8	
Net External Debt Ratio			13.0		13.6	13.5	9.4	6.1	3.9			13.3		18.2	22.9	28.7	31.5	33.4			5.6		11.7	10.0	9.6	3.6	0.3	
I N D I A										I S R A E L										Y U G O S L A V I A								
Gross Debt Service	644	605	784	678	2717	789	769	961	908	403	557	612	524	797	838	1102	1141	1449	485	672	838	665	1014	1358	1267	1431	1855	
Net Debt Service	596	562	733	630	2623	659	574	687	640	283	420	374	359	462	516	739	771	953	468	655	788	637	921	1296	1177	1308	1705	
Merchandise Exports	2037	2415	2961	2471	3899	4355	5323	5980	6252	960	1149	1509	1206	1825	1941	2416	3083	3924	1836	2237	3020	2364	3805	4072	4896	4896	5668	
Gross Debt Service Ratio	31.6	25.1	26.5	27.4	69.7	18.1	14.4	16.1	14.5	42.0	48.5	40.6	43.4	43.7	43.2	45.6	37.0	36.9	26.4	30.0	27.7	28.1	26.6	33.3	25.9	29.2	32.7	
Net Debt Service Ratio	29.3	23.3	24.8	25.5	67.3	15.3	10.8	11.5	7.0	29.5	36.6	24.8	29.8	25.3	26.6	30.6	25.0	24.3	25.5	29.3	26.1	26.9	24.2	31.8	24.0	26.7	30.1	
Gross External Debt			11252		12386	13178	14263	15534	16432			3395	4081	8093	4190	6210	7373	9040	10760			2443		3193	3476	6896	8589	10323
Net External Debt			10181		11743	12703	11738	10579	9744			2698	2862	3278	2946	5049	6435	7998	9535			1131		2216	4784	5215	6740	8104
Gross National Product	57001	58930	64766	60232	71374	85327	91516	104389	117520	7307	8559	9412	8426	10968	12340	12856	13592	15332	24392	26595	29226	26738	36100	39882	43679	50137	57032	
Gross External Debt Ratio			17.4		17.4	15.4	15.6	14.9	14.0			46.8	47.3	54.1	49.4	56.6	59.7	70.3	78.8			8.4		8.8	13.7	15.8	17.1	
Net External Debt Ratio			15.7		16.5	14.9	12.8	10.1	8.3			36.9	33.4	34.8	34.9	46.0	52.1	62.2	69.8			3.9		6.1	12.0	11.9	13.4	14.2
K O R E A										S I N G A P O R E										T A I W A N								
Gross Debt Service	332	401	531	421	751	958	1359	1848	2561	44	156	316	172	389	322	377	406	711	138	176	250	188	256	360	624	659	855	
Net Debt Service	309	380	490	393	669	911	1289	1714	2278	-39	60	179	67	207	111	169	133	328			98		122	211	470	447	479	
Merchandise Exports	1060	1616	3215	1964	4453	5071	7693	9986	12654	1755	2181	3610	2315	3785	5377	6586	8242	10134	1998	2914	4375	3095	5118	5302	8156	9349	12644	
Gross Debt Service Ratio	31.3	24.8	16.5	21.5	16.9	18.9	17.7	18.5	20.2	2.5	7.2	8.8	6.8	6.7	6.0	5.7	4.9	7.0	6.9	6.0	5.7	6.1	4.6	6.8	7.7	7.0	6.8	
Net Debt Service Ratio	29.2	23.5	15.2	20.0	15.0	18.0	16.8	17.2	18.0	-2.2	2.8	5.0	2.7	3.6	2.1	2.6	1.6	3.2	4.9	4.5	3.2	4.0	1.7	4.0	5.8	4.8	3.8	
Gross External Debt			3556		4693	6047	7370	8622	11992			459		558	600	772	1089	1120			1281		1535	2252	3030	3521	3903	
Net External Debt			2667		4546	5515	5746	5989	9461			-1827		-2254	-2407	-2592	-2769	-4183			158		346	1083	1420	2074	2394	
Gross National Product	15089	16616	20159	17288	23775	27894	33516	40070	47996	2739	3209	3686	3211	4304	5028	5620	6478	7597	8793	10250	12138	10394	13391	15033	17636	20266	24527	
Gross External Debt Ratio			17.6		19.7	21.7	22.0	21.5	25.0			12.5		13.0	11.9	13.7	16.8	14.7			10.6		11.5	15.0	17.2	17.4	15.9	
Net External Debt Ratio			13.2		19.1	19.8	17.1	14.9	19.7			-49.6		-52.4	-47.9	-46.1	-42.7	-55.1			1.3		2.6	7.2	8.1	10.2	9.8	

Sources: Exports, Interest Payments and Receipts: Table 1.
Amortisation Reserve Holdings: International Monetary Fund, International Financial Statistics, various issues.
GNP in Current Prices: World Bank data base.
Gross External Debt; National Foreign Assessment Center, Non-OPEC LDC's: External Debt Positions, Washington D.C., January 1980.
Israel Gross External Debt, Bank of Israel.
Note: Gross external debt includes public as well as private debt; net reserves are defined as the sum of foreign exchange holdings; gold reserves as valued by national authorities, SDR holdings, reserve position with the International Monetary Fund, less use of Fund credit.

TABLE 6

DOMESTIC EXPENDITURE SHARES, INCREMENTAL CAPITAL-OUTPUT RATIOS AND GROWTH RATES

	1964-73	1971-73	1974-76	1977-79	1974-79	1964-73	1971-73	1974-76	1977-79	1974-79	1964-73	1971-73	1974-76	1977-79	1974-79	1964-73	1971-73	1974-76	1977-79	1974-79		
ARGENTINA ^{a/}						BRAZIL					CHILE											
DOMESTIC EXPENDITURE SHARE (in current prices)																						
Private Consumption	65.5	52.5	48.6	45.4	47.4	71.4	67.8	67.2	68.5	67.9	73.6	73.5	78.5	77.6	78.2							
Public Consumption	13.7	22.9	28.5	27.4	28.1	10.6	9.6	9.3	9.5	9.3	12.2	14.1	13.2	12.4	12.8							
Total Consumption	79.2	75.5	77.2	72.8	75.5	82.0	77.4	76.6	77.9	77.2	85.0	87.6	91.6	89.9	90.9							
Gross Domestic Fixed Investment	20.3	24.0	22.7	27.4	24.5	18.0	22.6	23.4	22.1	22.8	14.0	12.4	10.4	10.1	9.1							
Increase in Stock	0.5	0.5	0.1	-0.2	0.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A							
Gross Domestic Investment	20.8	24.5	22.8	27.2	24.5	18.0	22.6	23.4	22.1	22.8	14.0	12.4	10.4	10.1	9.1							
INVESTMENT CAPITAL-OUTPUT RATIOS	4.3	5.5	20.4	9.9	13.0	2.3	1.7	3.1	4.3	3.6	6.2	6.7	-15.3	1.2	2.8							
GROWTH RATES (constant prices)																						
Growth National Product	4.7	4.8	0.9	1.9	1.2	8.0	12.1	7.3	5.3	6.3	3.7	1.6	-2.4	9.0	3.6							
Population	1.4	1.3	1.3	1.3	1.3	2.9	2.8	2.8	2.8	2.8	1.9	1.7	1.7	1.7	1.7							
Per Capita GNP	3.3	3.5	-0.4	0.6	-0.1	5.2	9.2	4.5	2.4	3.4	-1.8	-0.1	-4.1	7.3	1.9							
COLOMBIA						MEXICO ^{a/}					URUGUAY ^{a/}											
DOMESTIC EXPENDITURE SHARES (in current prices)																						
Private Consumption	73.2	72.3	72.3	68.9	70.6	72.3	72.1	65.1	64.5	64.9	75.5	73.5	73.6	73.3	73.4							
Public Consumption	7.2	8.1	7.2	7.1	7.2	7.8	8.5	10.6	11.6	11.0	13.7	14.2	14.2	12.6	13.5							
Total Consumption	80.4	80.3	79.5	76.0	77.8	80.1	80.6	75.7	76.1	75.9	89.2	87.7	87.7	85.9	87.0							
Gross Domestic Fixed Investment	18.0	18.7	18.9	20.5	19.7	19.9	19.0	21.3	21.2	21.3	10.8	10.0	12.1	14.2	12.9							
Increase in Stocks	1.6	1	2.6	3.5	3.0	N/A	0.4	2.9	2.7	2.9	N/A	2.3	0.2	-0.1	0.1							
Gross Domestic Investment	19.6	19.7	20.5	24.0	22.2	19.9	19.4	24.3	23.9	24.1	10.8	12.3	12.3	14.1	13.0							
INCREMENTAL CAPITAL-OUTPUT RATIOS	3.6	2.8	3.8	2.9	3.2	3.1	3.0	3.8	5.5	4.1	9.6	-11.0	3.6	3.3	3.4							
GROWTH RATES (constant prices)																						
Growth National Product	5.6	7.0	4.6	6.6	5.5	6.4	6.0	3.3	5.8	4.2	1.2	-1.5	3.3	5.0	3.9							
Population	2.7	2.3	2.3	2.2	2.3	3.2	3.2	3.3	3.3	3.3	0.8	0.2	0.2	0.7	0.5							
Per Capita GNP	2.9	4.7	2.3	4.4	3.2	3.2	2.7	0	2.5	0.9	0.4	-1.6	3.1	4.3	3.4							
INDIA						ISRAEL					YUGOSLAVIA ^{a/}											
DOMESTIC EXPENDITURE SHARES (in current prices)																						
Private Consumption	73.1	72.7	69.6	68.0	68.8	52.8	45.6	45.7	49.7	47.6	53.2	55.5	53.6	50.0	52.2							
Public Consumption	9.2	9.4	9.4	9.7	9.5	24.4	28.5	31.3	29.5	30.5	16.9	15.9	16.6	16.6	16.6							
Total Consumption	82.3	82.1	78.9	77.7	78.4	77.2	74.0	77.1	79.1	78.1	70.1	71.4	70.2	66.6	68.7							
Gross Domestic Fixed Investment	17.7	15.3	17.0	20.0	18.2	22.8	24.8	21.9	19.5	20.8	29.9	26.7	27.7	31.4	29.2							
Change in Stocks	N/A	2.6	4.2	2.3	3.5	N/A	1.3	1.0	1.4	1.2	N/A	1.9	2.3	2.2	2.2							
Gross Domestic Investment	17.7	17.9	21.1	22.3	21.6	22.8	26.0	22.9	20.9	21.9	29.9	28.6	29.8	33.4	31.3							
INCREMENTAL CAPITAL-OUTPUT RATIOS	5.8	8.9	4.4	5.3	4.9	2.7	3.3	11.0	7.1	8.8	5.3	5.9	4.3	4.4	4.4							
GROWTH RATES (constant prices)																						
Growth National Product	3.4	1.5	4.2	3.7	4.3	8.2	8.9	2.6	3.3	2.3	6.2	5.8	5.1	6.5	5.7							
Population	2.3	2.1	2.0	2.0	2.0	3.1	3.2	2.5	2.2	2.3	1.0	1.0	0.9	0.9	0.9							
Per Capita GNP	1.1	-0.6	2.2	1.7	2.3	5.1	5.7	0.1	1.2	0.0	5.2	4.9	4.2	5.6	4.7							
KOREA						SINGAPORE					TAIWAN											
DOMESTIC EXPENDITURE SHARES (in current prices)																						
Private Consumption	69.8	67.2	63.3	59.1	61.2	68.9	55.4	54.9	56.6	55.7	57.9	54.6	52.9	52.6	52.8							
Public Consumption	9.2	9.8	10.0	10.9	10.4	10.8	10.2	9.4	10.1	9.7	17.5	16.9	14.5	16.2	15.3							
Total Consumption	79.0	77.0	73.2	70.1	71.6	79.7	65.6	64.3	66.8	65.5	75.4	71.5	67.3	68.9	68.1							
Gross Domestic Fixed Investment	19.4	21.2	23.6	28.0	25.7	20.3	30.9	32.1	31.4	31.7	24.6	25.3	28.6	27.9	28.2							
Increase in Stocks	1.6	1.8	3.2	1.9	2.6	N/A	3.4	3.6	1.9	2.7	N/A	3.4	4.2	3.3	3.8							
Gross Domestic Investment	21.0	23.0	26.8	29.9	28.4	20.3	34.4	35.7	33.2	34.5	24.6	28.5	32.7	31.1	31.9							
INCREMENTAL CAPITAL-OUTPUT RATIOS	2.1	2.4	2.7	3.1	2.9	1.8	2.6	5.5	3.4	4.2	2.5	1.8	4.1	2.7	3.2							
GROWTH RATES (constant prices)																						
Growth National Product	9.1	8.9	8.9	10.1	10.1	10.5	10.4	6.3	8.8	7.5	9.6	11.2	4.4	9.6	7.6							
Population	2.2	2.0	1.9	1.8	1.9	1.9	1.7	1.5	1.1	1.3	2.3	2.1	1.9	1.9	2.0							
Per Capita GNP	6.9	6.8	7.0	8.3	8.3	8.6	8.6	4.8	7.6	6.1	7.3	9.1	2.5	7.7	5.5							

Source: World Bank data base.

Notes: a/ 1979 data not available on expenditure shares.

b/ Incremental capital output ratios have been calculated by assuming a one year lag between investment and output; the ratio for 1971-73, for example, has been derived by dividing the sum of gross fixed capital formation in 1970, 1971, 1972 by the increment in GNP between 1970 and 1973, both measured in constant prices.

c/ Growth rates have been calculated by regression analysis from the year preceding that indicated.

All three countries continued with outward-oriented policies in the years following the quadrupling of petroleum prices and the world recession. In Korea, quantitative import restrictions were liberalized and tariffs were lowered in 1973 and in 1977. The resulting reductions in import protection appear to have been greater than reductions export subsidies which occurred through the elimination of tax benefits on income derived from exports and decreases in wastage allowances on imported inputs used in export production. Also, new facilities were established for medium-term and long-term export credits.^{1/}

Import liberalization proceeded more rapidly in Taiwan than in Korea while reductions in tariffs were smaller in magnitude. In turn, Singapore had practically no import restrictions and further reduced its already low tariffs. And, both Singapore and Taiwan instituted new facilities for medium-term and long-term export credit.

At the same time, there are differences among the three countries in regard to the macro-economic policies followed as well as the course of the real exchange rate. Korea increased reliance on foreign borrowing in order to overcome the adverse effects of external shocks it suffered in 1974. At the same time, it ensured that the incremental inflow of capital was invested rather than consumed by providing investment incentives, reducing the government deficit, and re-establishing positive real interest rates. These measures contributed to the increase in the share of investment in aggregate expenditure from 23 percent in 1971-73 and to 27 percent in 1974-76.

^{1/} Exporters continued to benefit from the duty free entry of these inputs. While officially the prior exemption system on imported inputs was transformed into a drawback system, involving the payment and subsequent rebate of duties, in practice payments were not made.

With the rapid rise of investment, Korea expanded production for export as well as for domestic markets. Notwithstanding the appreciation of the exchange rate vis-a-vis the U.S. dollar from its undervalued "1972" level, increases in exports and import substitution, taken together, offset the adverse effects of external shocks on Korea's balance of payments in 1975, eliminating the need for additional net external financing.

Following the liberalization of imports, export expansion assumed increased importance relative to import substitution while the two effects combined came to exceed the adverse balance-of-payments effects of external shocks by more than four times in 1977. Although higher GNP growth rates added \$1.0 billion to the import bill, and Korea continued to suffer the effects of adverse external shocks, additional net external financing reached \$-3.3 billion as a result.

The increase in the share of investment in aggregate expenditure from 27 percent in 1974-76 to 30 percent in 1977-79 importantly contributed to the acceleration of economic growth in Korea. Notwithstanding the increased investment effort, however, export shares did not rise further and negative import substitution (i.e. an increase in import shares) occurred in 1978, largely as a result of the continued appreciation of the real exchange rate and the domestic expansionary measures applied that maintained rapid rates of economic growth at the cost of increased inflationary pressures.^{1/} These influences, combined with credit allocation favoring large, capital-intensive investments in intermediate products, led to a decline in the volume of exports in 1979.

^{1/} The real exchange rate vis-a-vis the U.S. dollar was 84 percent of its "1972" level in 1977 and 81 percent in 1978; in the two years, the real value of the money supply increased by 29 percent and 12 percent, respectively.

Additional net external financing was nearly offset by the trend value of the resource gap in 1977,^{1/} so that actual net external financing was practically nil. With unfavorable developments in trade, net external financing reached \$0.7 billion in 1978 while total external financing was \$1.7 billion. Also, Korea's gross debt service ratio (interest payments and amortization expressed as a proportion of the value of merchandise exports) increased from 17 percent in 1973 to 20 percent in 1978 while the ratio of the (gross) external debt to GNP rose from 18 percent to 25 percent.^{2/}

Taiwan let its real exchange rate appreciate by 23 percent in 1974 as compared to its "1972" level, leading to a decline in export market shares and to negative import substitution. These unfavorable changes in trade flows aggravated the effects on economic growth of the deflationary policies applied, involving a decline in the real value of the money supply by 24 percent in 1974. As a result, economic growth came practically to a halt whereas the 41 percent increase in wholesale prices in 1974 was followed by a 5 percent decline in 1975.

Savings in imports associated with the decline in the rate of economic growth did not fully offset the adverse balance-of-payments effects of losses in export market shares and negative import substitution in 1974.

Correspondingly, Taiwan's additional net external financing requirements

1/ The high value of the resource gap reflects the fact that the "1972" trade deficit would have increased further if import and export trends observed in the preceding decade continued.

2/ Table 5 also provides information on the net debt service ratio, derived by deducting interest receipts from debt service obligations, and the net external debt ratio, obtained by adjusting gross external debt for the net value of reserves. These ratios will be referred to in cases when they show results substantially different from the gross ratios.

exceeded the negative effects of external shocks, necessitating large foreign borrowing. The situation changed in subsequent years as the policies applied encouraged new investment and improved Taiwan's competitive position.

To begin with, real interest rates rose to 19 percent in 1975 when wholesale prices declined and it remained in the 7-9 percent range in the following years. Also, increased investment incentives were provided through amendments to the Statute for Encouragement of Investment and there was a surplus in the government budget. Finally, Taiwan's real exchange rate depreciated from year to year, exceeding the 1973 level, and approaching the "1972" average, towards the end of the period.

As a result, the share of gross domestic investment in aggregate expenditure increased from 28 percent in 1971-73 to 33 percent in 1974-76, with a decline to 31 percent in 1977-79 due largely to the decline in the rate of inventory accumulation. The rise in the rate of investment and improvements in its competitive position, in turn, contributed to increases in export shares and import substitution in Taiwan. At the same time, in conjunction with the liberalization of imports, export promotion assumed greater importance vis-a-vis import substitution.

These influences contributed to the acceleration of economic growth in Taiwan. Its gross national product grew at an average annual rate of 10 percent after 1975 while it hardly changed in the previous two years. Still, due to the slowdown in earlier years, Taiwan continued to experience import savings. All in all, the balance of payments impact of domestic economic policies affecting exports, import substitution, and the rate of economic growth exceeded the adverse effects of external shocks more than five times in 1978.

Correspondingly, additional net external financing became increasingly

negative and amounted to \$-3.0 billion in 1978. Adjusted for the trend value of the resource gap, actual net external financing was \$-1.9 billion, and total external financing \$-1.4 billion, representing largely the repayment of foreign debt. In the same year, the gross debt service ratio was 7 percent, only slightly exceeding the 6 percent ratio in 1973 while the gross external debt ratio was 16 percent as compared to 11 percent in 1973.

The real exchange rate in Singapore fell by 20 percent between "1972" and 1974 and increased only slightly in 1975. While exports continued to benefit from subsidies, reductions in import tariffs aggravated the effects of the appreciation of the real exchange rate giving rise to negative import substitution, and a slowdown in economic growth. Growth was further slowed by deflationary policies, although these were much less far-reaching than in Taiwan, with the real value of the money supply declining by 11 percent in 1974.

In 1974 and 1975, taken together, the net balance-of-payments effects of domestic economic policies added slightly to the adverse effects of external shocks in Singapore, thus raising external financing requirements. Financing took the form of the acceleration of the growth of foreign direct investment and the clandestine inflow of portfolio capital that shows up in the errors and omissions item. Political stability in Singapore was attractive to foreign investors and direct investment was further motivated by increased incentives through the extension of the tax-exempt status of pioneer industries from five to ten years and the establishment of the Capital Assistance Scheme to furnish capital to skill-intensive industries. At the same time, the inflow of foreign capital permitted maintaining gross investment at over one-third of aggregate expenditure.

The real exchange rate depreciated in subsequent years, surpassing the

1973 level by one-tenth, although falling short of the "1972" average in about the same proportion. Improvements in Singapore's competitive position were translated into rising export shares while negative import substitution continued during the period under consideration as tariffs were further reduced. With the effects of export promotion exceeding negative import substitution, and high investment shares being maintained, the rate of economic growth accelerated. Nevertheless, Singapore continued to experience import savings due to the slowdown in the rate of economic growth in the early part of the period.

Given the positive net balance-of-payments effects of domestic economic policies, additional net external financing requirements were considerably lower than the balance-of-payments effects of external shocks. With the trend value of the resource gap being small, actual net external financing was \$0.7 billion while interest and dividend payments raised total external financing to \$1.2 billion. Much of external financing continued to take the form of direct investments, and the gross debt service ratio declined from 9 percent in 1973 to 7 percent in 1978. And while the ratio of the gross external debt to GNP rose from 13 percent to 15 percent, Singapore's net reserves continued to exceed its gross external debt nearly three times.

Argentina, Brazil, Colombia, and Mexico

In 1974, the balance-of-payments effects of external shocks represented 4 percent of GNP in Brazil, 1 percent in Mexico and Colombia, and practically nil in Argentina. After increases in 1975, when adverse changes in the terms of trade reinforced the impact of the world recession, these ratios declined until 1977, with a small deterioration occurring in 1978, Argentina excepted. The relevant ratios for 1978 were: Brazil, 2 percent; Mexico, 1 percent; Argentina, -1 percent; and Colombia, -2 percent.

The four Latin American countries did not continue with reforms towards greater outward orientation during the period under consideration. Brazil and Colombia, in fact, increased the bias against exports through greater import protection and reduced export subsidies, respectively. Furthermore, Colombia let its real exchange rate to increasingly appreciate vis-a-vis the U.S. dollar. In the early part of the period, the exchange rate was overvalued also in Argentina and Mexico while there was little change in relative incentives to exports and to import substitution in the two countries.

At the same time, there were differences among the countries of the second group in regard to the macro-economic policies applied. In Brazil, the immediate response to external shocks was to increase foreign borrowing for the sake of maintaining a high rate of economic growth. In the years 1974 and 1975, taken together, the deterioration of the balance of payments resulting from external shocks was fully financed from abroad; increases in export market shares were offset by the rise in imports associated with higher GNP growth rates; and import substitution was practically nil.

Apart from permitting continued increases in domestic consumption, the amounts borrowed were employed to finance large investments in infrastructure and in highly capital-intensive industries producing intermediate goods for the domestic market. In turn, private investments in machinery industries were promoted through the increased application of credit preferences while real interest rates turned negative.

Measures aimed at reducing imports included increases in tariffs, advance deposit requirements, and import restrictions. Notwithstanding the introduction of some new export incentives, the net effects of the measures applied was to increase the bias against exports and in favor of import substitution. At the same time, the real value of the cruzeiro in terms of

the U.S. dollar changed relatively little.

The application of these measures led to considerable import substitution that came to exceed the combined balance-of-payments effects of external shocks after 1976, when additional net external financing turned negative. This result should, however, be considered in the light of the increased burden of interest payments and dividends that rose from \$1.0 billion in "1972" to \$2 billion in 1974, approached \$3 billion in 1976 and was nearly \$5 billion in 1978, raising total external financing requirements to \$7.6 billion.

With the amortization of foreign loans adding to the debt service burden, the gross debt service ratio rose from 43 percent in 1973 to 68 percent in 1978 whereas the gross external debt ratio increased from 14 percent to 24 percent. In turn, the rate of growth of GNP declined after 1976, reflecting the effects of investments in capital intensive industries, the decline in the rate of domestic saving associated with the maintenance of negative interest rates, the distortions due to accelerating inflation brought about by expansionary policies, and the deflationary policies followed between mid-1977 and mid-1978.

In Mexico, additional net external financing exceeded the balance-of-payments effects of external shocks by a considerable margin throughout the period under consideration. This result obtained as savings in imports associated with lower GNP growth rates did not suffice to offset the deterioration of the balance of payments resulting from losses in export market shares and negative import substitution.

Decreases in export market shares and negative import substitution show the direct and indirect effects of expansionary policies followed by the Echeverria Administration from 1972. These policies entailed rapid increases

in government expenditures without corresponding increases in revenues. As a result, the budget deficit, expressed as a proportion of GNP, increased from 1 percent in 1971 to 4 percent in 1974; it was between 3 and 4 percent of GNP in the following two years.

The budget deficit was financed by money creation^{1/} and by foreign borrowing. Money creation gave rise to rapid inflation and to the deterioration of Mexico's competitiveness that is not fully reflected by real exchange rates calculated by reference to relative prices. This is because, in Mexico's relatively open economy, increases in wages could not be fully translated into higher prices.

The decline in Mexico's competitiveness was not offset by a devaluation until September 1976. The devaluation, and the restrictive monetary policies adopted by the Administration of Lopez Portillo in 1977, with the real value of the money supply decreasing by 11 percent, led to reductions in import shares. However, increases in fuel exports apart, there was little improvement in export performance as the abolition of export subsidies largely offset the effects of the devaluation.

Expansionary policies were adopted again in 1978, when the real value of the money supply increased by 13 percent and the budget deficit approached 5 percent of GNP. With pressures on domestic capacity and the appreciation of the real exchange rate, the extent of negative import substitution increased to a considerable extent in 1978. This increase was only partly offset by the rise of petroleum exports and improvements in market shares for manufactured exports, reflecting the effects of the re-introduction of export subsidies.

^{1/} Apart from a small decline in 1974, the real value of the money supply increased at rates ranging from 4 percent to 15 percent between 1971 and 1976.

As a result of these changes, Mexico's additional net external financial requirements increased again in 1978. This increase was largely offset by the rise in tourist earnings and private transfers, so that actual net external financing was practically zero in 1978. Interest payments on debt contracted after 1971 and, to a lesser extent, dividend payments, however, gave rise to total external financing of \$3.0 billion that was largely met by additional foreign borrowing.

With continued foreign borrowing, Mexico's gross external debt ratio increased from 16 percent in 1973 to 36 percent in 1978. In the same period, the gross debt service ratio rose from 67 percent to 113 percent. And while adding tourist revenue to merchandise exports would lower the latter ratio to 72 percent, tourist revenue in Mexico is in large part offset by tourist expenditures abroad.

In Colombia, the adverse effects of external shocks were aggravated by negative import substitution in 1974 as the real exchange rate appreciated by 4 percent as compared to the "1972" average. In the following year, however, import shares declined in response to the deflationary policies followed, with the real value of the money supply falling by 13 percent in 1974 and by 4 percent in 1975. Colombia also experienced increases in export market shares in 1975, due to the release of coffee from stockpiles as coffee prices rose towards the end of the year.

With the rapid rise of coffee prices, the balance-of-payments effects of external shocks turned positive in 1976 and increased further in 1977, with a small decline in 1978. The opportunities provided by improvements in the balance of payments were not utilized, however, to accelerate the rate of economic growth in Colombia. Rather, the policy measures applied adversely affected the competitiveness of the noncoffee sector.

To begin with, the authorities limited the rate of crawl of the exchange rate, notwithstanding the acceleration of inflation occasioned by the rise in the money supply as the credit measures taken did not suffice to offset the effects of the increase in foreign exchange reserves on domestic money holdings.^{1/} After remaining unchanged in 1975, the real exchange rate appreciated vis-a-vis the U.S. dollar by 5 percent in 1976, 11 percent in 1977, and 2 percent in 1978, bringing it one-fifth below the "1972" level.

The adverse effects on exports of the appreciation of the exchange rate were aggravated by reductions in subsidies while only modest measures of import liberalization were taken. With the increased bias against exports, Colombia's export market share in manufactured goods declined by nearly one-half. Furthermore, fuel exports increasingly gave place to imports, reflecting the effects of the policies applied in earlier years that were inimical to new exploration. At the same time, little change was shown in traditional and in nontraditional primary exports except that releases from stockpiles raised the volume of coffee exports again in 1978.

The appreciation of the real exchange rate also led to negative import substitution in Colombia after 1975. The adverse balance-of-payments effects of declines in export shares and negative import substitution offset the favorable effects of external shocks in the years 1976 to 1978, on the average, while the maintenance of past GNP growth rates did not have differential effects on imports.

Correspondingly, additional net external financing was practically zero in Colombia in the years 1976 to 1978 combined. Due largely to smuggling that

^{1/} The money supply increased by 10 percent in 1976, 3 percent in 1977, and 6 percent in 1978 in real terms.

is included under non-factor services, there was nevertheless a surplus in the actual resource gap that was only partly offset by interest and dividend payments. With continued small borrowing abroad, Colombia accumulated nearly \$2 billion of reserves between 1975 and 1978, reducing its net external debt ratio from 13 percent to 4 percent. In the same period, the gross external debt ratio decreased from 17 percent to 15 percent while the gross debt service ratio fell from 32 percent to 18 percent (there was little change in these ratios between 1973 and 1975).

In Argentina, internal shocks predominated during the period under consideration. As a result of the expansionary monetary and fiscal policies followed, the real value of the money supply rose by 33 percent in 1973 and by 46 percent in 1974 while the budget deficit increased from 2 to 3 percent of GNP in the early seventies to 5 percent in 1973 and to 6 percent in 1974. The government attempted to offset the inflationary effects of these policies on the trade balance by successive devaluations, but it only succeeded to accelerate the wage-price spiral as labor unions and other interest groups were able to maintain, and even to increase, their real incomes. Correspondingly, the real exchange rate appreciated by 14 percent in 1973 and 6 percent in 1974; it was 12 percent below its "1972" level in the latter year.

Further devaluations in 1975 were accompanied by price and wage controls, giving rise to the depreciation of the real exchange rate in that year. This proved temporary, however, as prices and wages rebounded once the controls were lifted. The increase in the ratio of the governmental budget deficit to 12 percent of GNP in 1975 further contributed to inflation, with the wholesale price index rising at an average annual rate of 300 percent between the fourth quarters of 1974 and 1975 and approaching 1000 percent in early 1976.

Rapid inflation caused considerable dislocation, leading to the fall of GNP in 1975 and, again, in the first quarter of 1976. With declines in export market shares aggravating the effects of external shocks, Argentina also suffered large losses in foreign exchange reserves that raised questions about its creditworthiness. The new government, which came to power in March 1976, attempted to remedy the situation by introducing a policy package including deflationary monetary measures, increases in interest rates, reductions in the deficit in the government budget, wage control, and devaluation accompanied by reductions in export taxes on traditional primary exports.

Reductions in export taxes and the depreciation of the real exchange rate, attendant on the doubling of the peso-dollar rate in the last quarter of 1976, had their full impact on exports only in 1977. The expansion of exports was concentrated in traditional and nontraditional primary commodities, while Argentina continued to lose market shares in manufactured goods where export incentives were below their pre-1973 level. It also experienced continued import substitution as reductions in tariffs had little effect, given the high level of tariff redundancy.

Increases in exports and import substitution, together with the rise of investment activity reflecting greater confidence, contributed to economic expansion in 1977. But, the government was unable to restrain wages and it continued to run a budget deficit, albeit at a reduced rate. Following a four-month "price truce," in which the largest industrial firms participated, prices responded to the rising cost of labor. While earlier rates of inflation were not again reached, wholesale prices rose at an average annual rate of 150 percent in both 1977 and 1978.

The distortions caused by high rates of inflation contributed to the fall of GNP in 1978, thereby lessening import requirements. With reduced pressure

on domestic capacity, import shares also declined but this was offset by a fall in export shares as the real exchange rate appreciated again. At the same time, Argentina benefited from favorable external shocks in the form of improvements in its terms of trade and increases in foreign demand for its traditional exports. As a result of these influences, additional net external financing increasingly turned negative. With the negative trend value of the resource gap, reflecting the assumption that earlier trade surpluses continued, actual net external financing became even more negative, giving rise to considerable reserve accumulation and the repayment of loans.

Loan repayments explain the high gross debt service ratio in 1978 (49 percent) that followed a decline from the peak reached in 1975 (34 percent) to 23 percent in 1977, when it equalled the 1973 figure. In turn, the gross external debt ratio increased from 7 percent in 1973 to 10 percent in 1978 while the net external debt ratio declined from 5 percent to 3 percent, reflecting the accumulation of reserves.

The accumulation of reserves facilitated the task of the government to introduce a new economic program. This was done at the end of December 1978, involving a slowdown in increases in wages, public utility prices, money creation, and the depreciation of the exchange rate, together with the opening of capital markets to foreign transactions and a five-year tariff reduction plan. The effects of this program were not apparent, however, until the end of 1979.

Israel and Yugoslavia

In 1974, the combined balance-of-payments effects of external shocks amounted to 11 percent of GNP in Israel and 6 percent in Yugoslavia. In both countries, the adverse effects of these shocks increased in 1975, declined in 1976, and increased again afterwards. In 1978, they equalled 15 percent of

the gross national product in Israel and 10 percent in Yugoslavia.

The Israeli economy further suffered the shock of the 1973 Yom Kippur war that was followed by increases in the importation of military equipment from \$0.5 billion in 1972 to \$1.9 billion in 1975, approaching one-half of nonmilitary imports in that year. Military imports represented about one-half of total defense expenditures that amounted to three-tenths of the gross national product in 1975.

Israel as well as Yugoslavia raised the level of import protection, thereby increasing the bias against exports, and let the real exchange rate appreciate. In Israel, the real exchange rate vis-a-vis the U.S. dollar declined to 83 percent of the "1972" level in 1974 and stabilized at 91 percent in subsequent years. In Yugoslavia, a 10 percent appreciation occurred.

Israel also adopted deflationary policies in response to the shocks it experienced. Following increases of 16 percent in 1972 and 11 percent in 1973, the real value of the money supply fell by 22 percent in 1974 and by 14 percent in 1975, declining further by 3 percent in 1976. And, after increases from 13 percent in 1972 to 29 percent in 1975, the government budget deficit, expressed as a proportion of the gross national product, declined to 24 percent in 1974 and to 21 percent in 1975 and 1976.

The policies applied led to losses in exports, a fall in the rate of investment, and the deceleration of economic growth. Israel's export market shares decreased by 21 percent between "1972" and 1976; the share of investment in aggregate expenditure declined from 26 percent in 1971-73 to 23 percent in 1974-76; and the growth rate of GNP fell from 8.2 percent in 1963-73 to 2.6 percent in 1973-76. Lower GNP growth rates, in turn, resulted in import savings amounting to 3 percent of total imports in 1974, increasing to

investment while the resulting distortions raised incremental capital-output ratios.

With the gross national product remaining substantially below the level it would have reached if earlier trends continued, import savings amounted to nearly two-fifths of actual imports in 1978. Increased import savings, together with higher export shares and import substitution, offset in large part the increase in the balance-of-payments effects of adverse external shocks in that year. But, with military imports more than doubling between 1977 and 1978, actual net external financing reached \$1.9 billion in that year while total external financing was \$2.8 billion. Furthermore, with increased indebtedness, the gross external debt ratio rose from 54 percent in 1973 to 82 percent in 1978. In turn, the gross debt service ratio was maintained below 40 percent only because Israel could obtain long-term loans in the United States.

Yugoslavia responded to the external shocks it suffered in 1974 by adopting deflationary monetary policies that gave rise to a 4 percent decline in the real value of the money supply in 1974 after increases of over 20 percent in the preceding two years. However, the external shocks were not met by a devaluation; rather, the nominal exchange rate appreciated vis-a-vis the U.S. dollar and the real exchange rate fell by 11 percent.

The appreciation of the real exchange rate led to losses in export market shares and to negative import substitution in Yugoslavia. The adverse impact of these changes on the balance of payments was not fully offset by import savings associated with the decline in the rate of economic growth resulting from the application of deflationary policies. Correspondingly, additional net external financial requirements exceeded the balance-of-payments effects of external shocks in 1974 and, despite increases in workers' remittances,

Yugoslavia had to borrow \$1.0 billion to finance its resource gap. Borrowing requirements changed little in 1975, when import savings at low GNP growth rates and reductions in import shares due to the application of import restrictions approximately offset the increase in the adverse balance-of-payments effects of external shocks.

In response to the slowdown of economic growth, expansionary policies were adopted in 1976, entailing a 51 percent rise in the real value of the money supply. These policies were accompanied by further restrictions on imports. The resulting decline in import shares, together with decreases in the adverse balance-of-payments effects of external shocks, lowered additional net external financial requirements to a considerable extent and Yugoslavia accumulated reserves in 1976.

Reserve accumulation remained temporary, however, and Yugoslavia had to borrow \$1.5 billion in 1977 and \$1.3 billion in 1978 as the adverse balance-of-payments effects of external shocks increased. At the same time, with the acceleration of the rate of economic growth, further import savings did not occur while import substitution due to import restrictions was offset by declines in export market shares. These declines occurred as the exchange rate remained overvalued and there was increased discrimination against export activities through import protection and preferential credit allocation to import-substituting industries.

The loss in market shares occurred in traditional primary exports as well as in manufactured goods. Within the latter category, the losses were concentrated in developed country markets where Yugoslavia's export share declined by one-half between "1972" and 1978. This compares with a gain in market shares in exports to the centrally-planned economies.

Yugoslavia's poor performance in developed country markets led to

increased indebtedness in convertible currencies. The gross external debt ratio rose from 8 percent in 1973 to 18 percent in 1978 while the gross debt service ratio increased from 28 percent to 33 percent. The gross debt service ratio is raised further if it is compared to merchandise exports in terms of convertible currencies alone while it is reduced if workers' remittances are added to merchandise exports. With these adjustments, the gross debt service ratio was 30 percent in 1978. At the same time, a substantial part of foreign borrowing went into investment, increasing its share in aggregate expenditure from 29 percent in 1971-73 to 30 percent in 1974-76 and 33 percent in 1977-79.

India, Chile, and Uruguay

Among countries that followed inward-looking policies during the preceding decade, the combined balance-of-payments effects of external shocks equalled 2 percent of the gross national product in India, and 5 percent in Uruguay in 1974, it was practically nil in Chile. In India, the ratio increased in 1975, declined in 1976 and 1977, and returned to approximately the 1974 level in 1978. These adverse effects were more than offset, however, by increases in workers' remittances from the Middle East and in tourist receipts.

In turn, adverse balance-of-payments effects of external shocks increased to a considerable extent in Chile and in Uruguay. The rate of these effects on GNP reached 10 percent in 1975 in Chile and, after a slight decline in 1976, increased further in subsequent years, reaching 13 percent in 1978. The increase was smaller in Uruguay, where the ratio fluctuated between 6 percent and 7 percent, with the former figure applying in 1978.

India and the two Latin American countries of the group also had contrasting experiences as far as incentive policies are concerned. While substantive changes in the system of incentives were not made in India, Chile

and Uruguay introduced major reforms during the period under consideration. These reforms involved substantially reducing the bias against exports, raising real exchange rates and real interest rates, reducing budget deficits and increasing the role of market forces in general.

In response to the external shocks suffered in 1974, India adopted deflationary policies, with the real value of the money supply falling by 14 percent in that year. Nevertheless, inflation continued at a higher rate than in the United States and it was not fully offset by a devaluation. The appreciation of the real exchange rate vis-a-vis the U.S. dollar contributed to losses in export market shares and to negative import substitution, the adverse balance-of-payments effects of which were offset only in part by the import savings associated with the decline in the rate of economic growth resulting from the deflationary policies applied. Correspondingly, additional net external financing requirements exceeded the adverse balance-of-payments of external shocks by a considerable margin.

This situation continued in subsequent years, except for 1976 when a substantial devaluation in real terms led to import substitution in India. However, the actual resource gap was much smaller and it turned into a surplus of \$1.4 billion in 1976 and \$1.9 billion in 1977, largely because of the rise in workers' remittances and tourist receipts. The surplus was translated into reserve accumulation in 1976 (\$2.2 billion) as well as in 1977 (\$2.4 billion) that continued at a slightly reduced rate of (\$1.7 billion) in 1978. Although preliminary data indicate that the surplus in India's resource gap declined to \$0.4 billion in that year, this was in part offset by increases in official grants. With the accumulation of reserves, the net external debt ratio declined from 16 percent in 1973 to 8 percent in 1978; in the same period, the gross external debt ratio decreased from 17 percent to 14 percent and the

gross debt service ratio from 27 percent to 15 percent.

The conservative policies of reserve accumulation were not conducive to the acceleration of economic growth. Nevertheless, GNP growth rates rose somewhat compared to the 1963-73 period as the performance of agriculture improved and the rate of domestic savings increased in response to the rise of real interest rates. There was also negative import substitution in response to the trade liberalization measures introduced towards the end of the period.

Import liberalization was, however, limited to noncompeting imports. This benefited, in particular, production for domestic markets through the easier availability of imported inputs while exporters already had such privileges beforehand. Also, the practical application of export promotion measures continued to be plagued by administrative difficulties and the incentives actually granted fell far short of the rates of import protection as domestically-produced goods faced practically no foreign competition. In particular, labor-intensive manufactures received few export incentives, although they conform to India's comparative advantage. Correspondingly, India continued to lose export market shares, especially in manufactured goods, where actual exports fell to 70 percent of hypothetical exports, calculated on the assumption of unchanged market shares, in 1978.

Chile, in turn, abandoned its inward-oriented strategy in favor of outward orientation. It abolished all import restrictions and reduced tariffs over a five-year period to 10 percent in June 1979, the only exception being the automobile industry. Tariff reductions were part of a package of economic policies that included a substantial devaluation in real terms, the abolition of price control, the establishment of realistic prices for public utilities, the elimination of budget deficits, the establishment of positive real interest rates, and the liberalization of financial markets.

The course of the economy in the years immediately following the fall of Allende in September 1973 was, however, determined by the deflationary policies of the newly-installed Pinochet government. These policies aimed at lowering the rate of inflation that reached 500 percent a year; they became even more severe in 1975 in response to the terms-of-trade loss Chile suffered in that year.

The policies applied led to a decline in the real value of the money supply by 15 percent in 1974 and by 25 percent in 1975 while the government budget deficit gave place to a surplus. The continued indexing of wages held back the decline in the rate of inflation, however. As measured by the adjusted consumer price index prepared by the World Bank, December-to-December price increases were 405 percent in 1973, 376 percent in 1974 and 341 percent in 1975.

With the indexing of wages, the brunt of the adjustment fell on the unemployed. In conjunction with the 7 percent fall of GNP between 1973 and 1975, unemployment rose from 5 percent of the labor force in December 1973 to 14 percent in December 1975 in the Greater Santiago area. Unemployment rates fell to 10 percent in December 1976 but declined slowly afterwards as much of the subsequent rise in the gross national product was attained through increases in the productivity of labor and capital.

The gross national product rose by 13 percent between 1975 and 1977 and by 20 percent between 1977 and 1978, although investment rates remained unchanged, reflecting a decline in incremental capital-output ratios. At the same time, inflation rates, measured from December to December, fell from 341 percent in 1975 to 174 percent in 1976, 63 percent in 1977, and 30 percent in 1978. The decrease in the rate of growth of the money supply was smaller, so that real money balances held by firms and individuals were replenished.

The policies applied further involved substantial increases in the real exchange rate, although the extent of appreciation is overstated by the use of the (adjusted) consumer price index used in the calculations, by reason of declines in retail margins. Still, this index has been utilized because it incorporates adjustments for suppressed inflation in the early seventies that have not been made in the wholesale price index.

The depreciation of the real exchange rate led to rapid increases in export market shares, with the resulting expansion representing 31 percent of total exports in 1978. Increases in market shares were particularly pronounced in manufactured goods; in 1978 these exports reached three times the level that would have been attained if Chile maintained its "1972" market shares. There was also considerable import substitution in response to the depreciation of the real exchange rate, but this came to a standstill in 1977, and declined afterwards, as tariff reductions increasingly weighed upon import-substituting industries. Import savings associated with lower GNP growth rates also declined as economic growth accelerated.

At the same time, the balance-of-payments effects of external shocks increased to a considerable extent, necessitating additional net external financing. Nevertheless, with rapid increases in GNP, the gross external debt ratio hardly surpassed the 1973 level in 1978 (42 percent) while its peak level was 48 percent in 1975. The improvement was even greater in terms of the net external debt ratio as Chile accumulated reserves. The rise in the gross debt service ratio from 42 percent in 1973 to 59 percent in 1978, in turn, is fully explained by increased loan repayments that are included under amortization.

In response to the quadrupling of oil prices, deflationary monetary policies were adopted in Uruguay, with the real value of the money supply

falling by 8 percent between 1973 and 1974. The high rate of inflation also led to reductions in the real value of government revenues, however, and the budget deficit increased. Also, Uruguay failed to devalue pari passu with inflation, and the real exchange rate vis-a-vis the U.S. dollar appreciated by 8 percent.

With the fall in the real exchange rate, there was little change in export shares and in import substitution, so that Uruguay had to rely on foreign borrowing, complemented by reductions in reserves, to finance its rising resource gap. Rather than attempting to remedy its external situation by deflating further the economy, however, the government opted for a "fuite en avant" by introducing reforms that represented a break with the policies followed in the preceding decades.

The policy changes introduced in July 1974 included decontrolling domestic prices, eliminating import restrictions, reducing tariffs, and abolishing minimum foreign financing requirements for imports, with exceptions made for capital goods in the latter case. Also, interest rates were raised, foreign capital movements liberalized, and the system of minidevaluations adjusted so as to depreciate the peso in real terms.

The real exchange rate increased by 20 percent in 1975, rose further in 1976 and 1977 and, notwithstanding a decline in 1978, it remained 5 percent above the 1973 level and only slightly below the "1972" average. And while tariff reductions remained limited in scope, nontraditional exports received tax and tariff rebates, preferential credits, and tax relief, thereby reducing the longstanding bias against exports.

The measures applied gave impetus to the rapid expansion of exports. Increases were especially large in manufactured exports that exceeded the hypothetical level, calculated on the assumption of unchanged market shares,

more than three times in 1978. Improvements in the system of incentives, together with the establishment of positive real interest rates and reductions in the budget deficit, further contributed to increases in incremental capital-output ratios, a rise in the share of investment in GNP, and ultimately to the acceleration of economic growth. The gross national product increased at an average annual rate of 3.3 percent between 1973 and 1976 and 5.0 percent between 1976 and 1979, following a decline in the early seventies and virtual stagnation in the previous decades.

While the rise in imports associated with the acceleration of economic growth in part offset increases in export shares, and there was little import substitution, the net effect of domestic economic policies was to reduce external financial requirements attendant upon external shocks. Correspondingly, the rise in the gross debt service ratio from 33 percent in 1973 to 36 percent in 1975 was followed by a decline to 25 percent in 1977. And while increases in external shocks and the fall in beef exports due to the imposition of restrictions in the Common Market^{1/} occasioned a rise in this ratio to 30 percent in 1978, the 1973 level was not again reached.

Uruguay's external debt increased to a considerable extent following the oil crisis, with the gross external debt ratio reaching 16 percent in 1974. It remained at this level afterwards while the net external debt ratio declined from 6 percent in 1973 to nil in 1978. The latter figure takes account of increases in the national valuation of gold holdings; the ratio was percent if such an adjustment is not made.

Conclusions and Evaluation

^{1/} Under the methodology applied, the latter appears as a loss in market shares in traditional exports that in part offset the gains Uruguay made in nontraditional exports.

Among newly-industrializing developing countries in the years 1974 to 1978, on the average the ratio of the balance-of-payments effects of external shocks to the gross national product was the highest in Singapore (23 percent). The same ratio is obtained in relating the effects of external shocks to the average value of exports and imports, which provides an indication of the adjustment in trade flows necessary to offset the adverse balance-of-payments impact of external shocks. The corresponding ratios were 7 percent and 37 percent in Korea and 7 percent and 19 percent in Taiwan (Table 7).^{1/}

The three Far Eastern countries did not modify their outward-oriented strategies in response to external shocks and, correspondingly, experienced further increases in export market shares during the period under consideration. These countries also provided increased investment incentives and re-established positive real interest rates, leading to a rise in the rate of domestic saving and investment.

The policies applied enabled the three Far Eastern countries to maintain rates of economic growth higher than any other newly-industrializing developing country. This was the case notwithstanding the fact that Taiwan and, to a lesser extent, Singapore accepted reductions in the rate of economic growth in the years 1974 and 1975 for the sake of limiting their foreign indebtedness and lowering the rate of inflation.

Korea, in turn, increased reliance on foreign capital so as to maintain rapid rates of economic growth following the external shocks it suffered in 1974. Correspondingly, Korea's external debt reached 25 percent of GNP in

^{1/} It should be recalled that, in calculating these ratios, the gross national product and the average value of exports and imports (average value of trade) have been expressed in "1972" prices.

1978, although rapid increases in exports made it possible to limit the gross debt service ratio to 20 percent, substantially below the levels observed in the early seventies. The situation deteriorated in 1979, when exports declined as the exchange rate became increasingly overvalued and some large, capital-intensive investments were undertaken.

In the second group of Latin American countries, the balance-of-payments effects of external shocks were negligible in Argentina and in Colombia, which did not suffer from increases in petroleum prices. Colombia further enjoyed the favorable effects of increased coffee prices. The opportunities provided by improvements in the balance of payments were not utilized, however, to accelerate the rate of economic growth. Rather, Colombia let its real exchange rate appreciate and reduced export subsidies, with adverse effects on exports as well as on import substitution.

Brazil also increased the bias against exports by raising the level of import protection and favoring import-substituting industries in the allocation of credits. Furthermore, it substantially increased foreign borrowing, with a view to maintaining high rates of economic expansion in the face of the adverse balance-of-payments effects of external shocks that equalled 3 percent of GNP and 47 percent of the average value of trade in the 1974-78 period. Given the high capital intensity of import-substituting industries, however, incremental capital-output ratios increased to a considerable extent, leading to a slowdown in economic growth as Brazil failed to utilize the proceeds of foreign credits to raise the share of investment in GNP. At the same time, the gross debt service ratio increased from 43 percent to 68 percent, and the ratio of external indebtedness to GNP from 14 percent to 24 percent, between 1973 and 1978.

The application of expansionary fiscal policies led to the deterioration

of Mexico's competitive position, necessitating foreign borrowing far in excess of the balance-of-payments effects of external shocks that averaged 1 percent of GNP and 23 percent of the average value of trade during the period under consideration. As a result, Mexico's gross external debt reached 35 percent of its GNP in 1978, notwithstanding large increases in oil earnings, and the gross debt service ratio surpassed 100 percent. At the same time, with decreases in (non-oil) export shares and negative import substitution, the rate of economic growth did not reach the levels observed in the 1963-73 period and growth involved a high cost in terms of investment inasmuch as the incremental capital-output ratio nearly doubled after 1973.

In Argentina, expansionary policies led to rapid inflation as resistance to a decline in real incomes on the part of labor unions and other groups generated a wage-price spiral. Rapid inflation, in turn, caused considerable dislocation and the rate of economic growth declined from 4.7 percent in 1963-73 to 1.2 percent in 1973-79. But, import savings at lower GNP growth rates and favorable external shocks at the end of the period led to reserve accumulation that facilitated the introduction of economic reforms in December 1978.

In the third group of countries, the balance-of-payments effects of external shocks averaged 12 percent of GNP in the years 1974 to 1978 in Israel and 8 percent in Yugoslavia; the corresponding ratios with respect to the average value of trade were 57 percent and 74 percent, respectively. In response to these shocks, Israel and, in particular, Yugoslavia increased the bias against exports through higher import protection, resulting in losses in export market shares.

During much of the period under consideration, Israel applied deflationary policies and let the exchange rate appreciate, resulting in a

decline in the rate of economic growth from 8.2 percent in 1963-73 to 2.3 percent in 1973-79. And while the devaluation of the exchange rate towards the end of the period led to the expansion of exports and GNP, this was accomplished at the cost of accelerating inflation. Also, the ratio of the gross external debt to GNP increased from 54 percent in 1973 to 82 percent in 1978, and the gross debt service ratio was maintained below 40 percent only because Israel was able to obtain long-term loans in the United States.

In Yugoslavia, the gross external debt ratio rose from 8 percent to 18 percent, and the gross debt service ratio from 28 percent to 33 percent, between 1973 and 1978. Much of the inflow of capital went into investment, permitting the maintenance of relatively high GNP growth rates (5.7 percent between 1973 and 1979). Yugoslavia's poor export performance in developed country markets, however, creates dangers for the future, and the efficiency of some of the capital-intensive import-substituting investments is open to doubt.

The average balance-of-payments effects of external shocks equalled 2 percent of India's GNP and 49 percent of the average value of its trade during the 1974-78 period, but these effects were largely offset by earnings derived from workers' remittances and tourism. By contrast, the balance-of-payments effects of adverse external shocks equalled 8 percent of GNP and 61 percent of the average value of trade in Chile and 6 percent and 62 percent in Uruguay. And, whereas the two Latin American countries adopted outward-oriented policies in response to these shocks, India did not substantially modify the system of incentives and chose to accumulate reserves. As a result, India experienced further losses in export market shares and its GNP growth rate did not substantially rise above the level experienced in the previous decade, notwithstanding the improved performance of agriculture and increases in the

rate of domestic savings.

The turn towards outward orientation was accompanied by severe deflationary policies in Chile that was not the case in Uruguay where tariff reductions also proceeded at a slower rate. The effects of the differences in the policies applied are apparent in the pattern of economic growth in the two countries. In Chile, an average rate of GNP growth of 1.6 percent between 1971 and 1973 was followed by a decline of 2.4 percent between 1973 and 1976 and an increase of 9.0 percent between 1976 and 1979; in Uruguay, the corresponding growth rates were -1.5 percent, 3.3 percent, and 5.0 percent, respectively.

The acceleration of economic growth in the two countries was associated with a substantial decline in incremental capital-output ratios. They also experienced a fall in the ratio of external debt, net of reserve accumulation, to GNP. Finally, the debt service ratio fell in Uruguay while the increase in this ratio in Chile is explained by the repayment of foreign loans that is included under amortization.

The findings point to the advantages of outward-oriented policies for export performance and for economic growth in the face of external shocks. Countries applying such policies experienced increases in their export market shares while losses in market shares occurred in countries characterized by inward orientation (Table 7).^{1/} Reliance on export promotion in response to external shocks under an outward-oriented strategy, in turn, favorably affected economic growth.

^{1/} The only exception was Brazil where the share of exports increased, notwithstanding the rise in the anti-export bias due to higher protection. But, export shares declined towards the end of the period and a number of industrial firms were subject to contractual export obligations, giving rise to exports below cost.

In the group of twelve newly-industrializing developing countries, the rank correlation coefficient between the extent of reliance on export promotion in response to external shocks, defined as the ratio of the increment in exports associated with increases in market shares to the balance-of-payments effects of external shocks, and the rate of growth of GNP was 0.48 during the 1973-79 period.^{1/} This result is statistically significant at the one percent level.^{2/}

The extent of correlation between the two variables is reduced by reason of the fact that in the two countries, Chile and Uruguay, which adopted outward-oriented policies during the period under consideration, the favorable effects of these policies on economic growth were observable with a time lag. To allow for this lag, the extent of reliance on export promotion in response to external shocks was also correlated with the rate of GNP growth in the period 1975-79; a Spearman rank correlation coefficient of 0.70 was obtained in this case.

The favorable experience of countries applying an outward-oriented development strategy may be explained by the efficient use of resources and rapid technological change under such a strategy that provides similar incentives to exports and to import substitution. This proposition receives support from the observed high correlation between the extent of reliance on export promotion and the incremental capital-output ratio. Using the

^{1/} External shocks and ratios of policy responses to external shocks, including additional net external financing, increases in export market shares, import substitution, and lowering the rate of economic growth are averages for the years 1974-1978, calculated on 1971-73 basis. The relevant data are shown in Table 7.

^{2/} Extrapolating the value of statistical significance calculated for ten observations, a Spearman rank correlation coefficient of 0.29 or higher will be significant at the one percent level in the case of twelve observations.

reciprocal of the incremental capital-output ratio in the calculations, the Spearman rank correlation coefficient between the two variables was 0.75 in the 1973-79 period. Practically the same result, a coefficient of 0.77, is obtained if incremental capital-output ratios for the 1975-79 period are used in the calculations, in order to allow for the possibility of lags in the adjustment.

The introduction of lags will affect the results, however, in attempting to explain intercountry differences in GNP growth rates in terms of the incremental capital-output ratio and the domestic savings ratio. Thus, in replacing data for 1973-79 by data for 1975-79, the Spearman rank correlation coefficient increases from 0.43 to 0.82 if the reciprocal of the incremental capital-output ratio, and it declines from 0.59 to 0.46 if the domestic savings ratio, is correlated with the rate of growth of GNP.^{1/} The results obtained for the years 1975-79 closely correspond to estimates for the 1960-73 period in a 113 country sample where rank correlation coefficients of 0.72 and 0.40 were obtained in the two cases, respectively.^{2/}

In order to separate the effects of the incremental capital-output ratio and of the domestic savings ratio on economic growth, multiple regression techniques have further been applied. The results shown in equations (1) and (2) indicate that the rate of economic growth is affected by both variables, which are highly significant statistically and explain about four-fifths of

^{1/} The results are not appreciably affected if the share of gross domestic investment, or that of gross domestic fixed investment, is used in the calculation in the place of the domestic savings ratio. (Data on the share of investment in aggregate expenditure are shown in Table 6.)

^{2/} Michael Hopkins and Ralph van der Hooven, "Basic Needs and Economic Theory," Geneva, International Labor Office, August 1980 (mimeo).

intercountry variations in GNP growth rates.^{1/} It is also apparent that, in an intercountry context, a 10 percent increase in the reciprocal of the incremental capital-output ratio is associated with a 9-10 percent increase in the GNP growth rate and a 10 percent increase in the domestic savings ratio is associated with a 3-4 percent increase in the GNP growth rate.

$$(1) \quad 1973-79: \quad \log y = 1.806 + 0.972 \log \Delta Y/I + 0.385 \log S/Y \quad R^2 = 0.782$$

(2.594) (4.866) (1.973)

$$(2) \quad 1975-79: \quad \log y = 1.935 + 0.852 \log \Delta Y/I + 0.311 \log S/Y \quad R^2 = 0.872$$

(4.145) (7.454) (2.157)

The importance of policy choices is further indicated by the lack of a negative correlation between the balance-of-payments effects of external shocks, expressed as a proportion of GNP, and the rate of economic growth. In fact, the correlation between the two variables was slightly positive, 0.19, statistically significant at the 10 percent level. This result is compatible with the hypothesis that external shocks provided inducement for policy improvements as was the case in Chile and Uruguay.

There was no significant statistical relationship between reliance on additional net external financing in response to external shocks and the rate of growth of GNP, with the Spearman correlation coefficient between the two variables being -0.08. The result reflects the fact that the effects of foreign borrowing on economic growth depend on the uses to which the proceeds of foreign loans are put. In Brazil, for example, where the proceeds were used largely for raising consumption levels and for investment in high-cost

^{1/} Explanation of symbols: Y = Gross National Product; I = gross domestic investment, S/Y = gross domestic savings ratio; t-values are shown in parenthesis.

TABLE 7
REPRESENTATIVE RATIOS OF BALANCE PAYMENTS EFFECTS OF EXTERNAL SHOCKS AND POLICY RESPONSES TO THESE SHOCKS
 (averages for years 1974 to 1978)

	<u>External Shocks</u>		<u>Terms of Trade</u>	<u>Export Volume</u>	<u>Additional Net</u>	<u>Increase in Export</u>	<u>Import</u>	<u>Effects of Lower</u>	<u>Gross Debt</u>	<u>Growth Rate</u>		<u>Incremental</u>		<u>Domestic</u>	
	as a percentage of		Effects	Effects	External Financing	Market Shares	Substitution	GNP Growth Rate	Service Ratio	of GNP		Capital-Output		Savings Ratio	
	GNP	Average Trade	as a percentage of		as a percentage of		as a percentage of		percent	1973-79	1975-79	1973-79	1975-79	1973-78	1975-78
		External Shocks		External Shocks		External Shocks									
ARGENTINA	0.2	3.8	65	35	-207	-95	386	16	33.6	1.2	1.3	13.0	16.6	24.6	26.9
BRAZIL	2.7	46.6	82	18	27	15	67	-10	53.6	6.3	5.8	3.6	3.9	20.9	21.4
CHILE	8.0	61.1	89	11	-6	54	21	31	49.0	3.6	8.0	2.8	1.4	10.3	8.9
COLOMBIA	-0.7	-8.8	243	-143	65	-19	-139	-7	24.4	5.5	6.1	3.2	3.1	22.1	23.2
MEXICO	1.3	23.4	63	37	205	-28	-102	25	90.0	4.2	4.7	4.1	4.0	22.2	22.7
URUGUAY	6.1	62.2	90	10	71	36	4	-11	26.7	3.9	4.3	3.4	3.6	12.1	12.5
INDIA	2.1	48.8	71	29	134	-20	-13	-2	23.8	4.3	3.7	4.9	5.7	20.9	21.9
ISRAEL	11.9	56.6	82	18	57	-20	15	48	40.4	2.3	2.2	8.8	10.8	6.6	6.1
YUGOSLAVIA	7.8	74.2	76	24	64	-10	18	28	29.7	5.7	6.1	4.4	4.7	26.5	28.3
KOREA	6.9	37.1	74	26	-92	89	135	-32	18.8	10.1	11.0	2.9	2.8	23.6	24.0
SINGAPORE	23.3	22.5	72	28	68	23	-43	53	6.1	7.5	8.2	4.2	3.6	27.6	28.2
TAIWAN	6.5	19.3	41	59	-76	10	35	131	6.7	7.6	9.8	3.2	2.6	32.6	32.3

Source: See Table 1, 5, and 6.

APPENDIX TABLE 1

BALANCE OF PAYMENTS EFFECTS OF EXTERNAL SHOCKS AND OF POLICY RESPONSES TO THESE SHOCKS (1974-78 Average)
(\$ U.S. million)

	ARGENTINA	BRAZIL	CHILE	COLOMBIA	MEXICO	URUGUAY	INDIA	ISRAEL	YUGOSLAVIA	KOREA	SINGAPORE	TAIWAN
I. EXTERNAL SHOCKS												
Effects of Increased Import Prices	1727	7102	1248	780	2442	351	3168	2061	3913	4742	4393	3720
of which, Fuels	351	3257	235	63	210	134	1274	518	814	1388	1909	995
Non Fuels	1376	3845	1014	717	2232	217	1945	1543	3099	3354	2484	2725
Effects of Increased Export Prices	1665	4729	589	1011	1995	178	2115	1111	1904	3424	3669	3357
of which, Traditional Primary	624	2345	235	740	473	31	365	44	76	154	0	0
Fuels	20	150	3	79	617	0	24	0	64	79	1559	94
Other Non-Traditional Primary	566	1113	182	36	264	73	636	221	467	335	847	403
Manufactured	456	1121	170	156	640	75	1090	845	1297	2856	1264	2860
Difference (Terms of Trade Effects)	61	2373	659	-231	447	173	1053	950	2009	1319	724	363
of which, Pure Term of Trade Effects	1067	1203	1707	-354	-794	265	1077	136	559	890	-762	847
of which, Unbalanced Trade Effect	-1006	1170	-1048	123	1242	-92	-24	815	1451	429	1486	-484
Trend Value of Exports, in "1972" prices	3026	5658	1233	1159	2393	294	3765	1976	3669	3424	3612	5266
Hypothetical Exports, in "1972" prices	2993	5134	1157	1023	2136	274	3336	1762	3022	2973	3329	4744
Difference (Export Volume Effects)	33	523	76	136	257	20	429	215	646	451	284	522
of which, Traditional Primary	-23	324	56	99	105	9	80	3	23	19	0	0
Fuels	2	14	1	18	7	0	6	0	6	6	158	3
Other Non-Traditional Primary	47	93	20	4	41	8	60	29	65	24	104	60
Manufactured	6	93	-1	15	105	4	283	183	552	402	21	458
of which, Growth Effects	68	192	6	42	195	7	306	264	342	571	178	762
Income Elasticity Effects	-61	-99	-7	-26	-90	-3	-23	-81	211	-169	-157	-304
II. POLICY RESPONSES												
Actual Resource Gap, in Current Prices	-1156	3880	44	-341	1098	67	-564	1973	654	854	660	-390
Trend Value of Resource Gap, in "1972" Prices	-962	3089	87	-403	-345	-70	-2556	-1309	-1032	2483	-21	283
Difference (Additional Net External Financing)	-195	791	-43	62	1442	137	1992	664	1686	-1630	682	-673
Actual Exports in "1972" Prices	2905	5577	1554	1005	1938	344	3047	1527	2763	4548	3556	4837
Hypothetical Exports, in "1972" Prices	2993	5134	1157	1023	2136	274	3336	1762	3022	2973	3329	4744
Difference (Increase in Export Market Shares)	-89	442	397	-18	-198	70	-289	-234	-259	1575	227	93
of which, Traditional Primary	-100	-168	204	102	-154	-3	7	-5	-98	69	0	0
Fuels	-2	-8	-1	-47	148	0	-17	0	-4	1	19	14
Other Non Traditional Primary	134	332	38	8	-80	5	165	-26	-34	142	121	181
Manufactured	-120	287	157	-80	-111	68	-444	-203	-123	1363	87	-102
Hypothetical Imports, in "1972" Prices	2360	8798	1007	1029	3380	283	2827	2768	4881	7381	4986	4640
Actual Imports, in "1972" Prices	1997	6857	853	1161	4098	277	3024	2591	4395	4990	5619	4331
Difference (Import Substitution)	363	1941	154	-132	-719	7	-197	177	486	2391	-433	309
of which, Fuels	-40	250	-51	-14	134	9	-8	-26	41	188	102	-77
Non Fuels	403	1691	205	-118	-852	-3	-189	203	445	2203	-535	386
Trend Value of Imports, in "1972" Prices	2374	8520	1234	1022	3558	263	2803	3326	5624	6841	5519	5797
Hypothetical Imports, in "1972" Prices	2360	8798	1007	1029	3380	283	2827	2768	4881	7381	4986	4640
Difference (Import Effects of Lower GNP)	15	-278	227	-6	178	-20	-25	558	742	-567	532	1157
of which, Fuels	6	-39	35	-1	24	-11	-1	26	73	-40	79	46
Non Fuels	9	-239	192	-7	155	-9	24	532	670	-527	454	1111

Source: International and National Statistics

APPENDIX TABLE 2

TRADE EFFECTS OF EXTERNAL SHOCKS AND POLICY RESPONSES TO THESE SHOCKS
Commodity Groups (1974-78 Average Ratio)

	ARGENTINA	BRAZIL	CHILE	COLOMBIA	MEXICO	URUGUAY	INDIA	ISRAEL	YUGOSLAVIA	KOREA	SINGAPORE	TAIWAN
<u>EXPORTS</u>												
<u>Traditional Primary Products</u>												
Hypothetical/Trend	101.3	89.9	94.0	85.8	87.2	95.1	89.8	97.0	93.2	83.9		
Actual/Hypothetical	94.3	94.2	123.0	117.0	78.4	98.2	100.9	94.0	69.2	168.3		
<u>Fuels</u>												
Hypothetical/Trend	79.6	79.6	79.6	79.6	79.6	0	79.6	79.6	79.6	79.6	79.6	79.6
Actual/Hypothetical	77.9	84.4	46.0	34.0	624.3	0	30.4	35.3	83.7	103.6	103.1	213.0
<u>Non-Traditional Primary Products</u>												
Hypothetical/Trend	90.3	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2	90.2
Actual/Hypothetical	130.6	138.7	119.9	122.0	78.5	107.1	129.8	90.1	94.4	165.3	112.5	132.6
<u>Manufactured Goods</u>												
Hypothetical/Trend	99.2	93.5	101.2	95.5	90.7	90.7	87.9	88.5	79.0	86.7	98.8	90.1
Actual/Hypothetical	84.6	121.5	292.8	74.9	89.1	288.3	78.4	85.6	94.1	151.8	105.0	97.6
<u>Total</u>												
Hypothetical/Trend	98.9	90.7	93.8	88.3	89.2	93.1	88.6	89.1	82.4	86.8	92.1	90.1
Actual/Hypothetical	97.0	108.6	134.3	98.2	90.7	125.6	91.3	86.7	91.4	153.0	106.8	102.0
<u>IMPORTS</u>												
<u>Fuels</u>												
Hypothetical/Trend	96.0	103.5	70.7	90.1	88.5	126.5	100.2	84.1	82.8	107.6	89.2	83.4
Actual/Hypothetical	131.0	77.9	160.5	437.8	26.9	82.5	102.9	118.8	88.3	66.7	84.2	133.3
<u>Non Fuels</u>												
Hypothetical/Trend	99.6	103.2	82.7	100.7	95.4	104.2	101.0	83.2	87.1	108.4	90.5	79.9
Actual/Hypothetical	81.9	77.9	77.8	111.5	126.6	101.1	107.8	92.3	90.2	67.7	112.3	91.2
<u>Total</u>												
Hypothetical/Trend	99.4	103.3	81.6	100.6	95.0	107.6	100.9	83.2	86.8	108.3	90.4	80.0
Actual/Hypothetical	84.6	77.9	84.7	112.9	121.3	97.7	107.0	93.6	90.1	67.6	108.7	93.3

Sources: International and National Statistics

import-substituting industries, the rate of economic growth declined while foreign debt increased.

At the same time, servicing the foreign debt entails a cost for the national economy, lowering the rate of economic growth under ceteris paribus assumption. In fact, in the twelve newly-industrializing developing countries, the correlation between the gross debt service ratio and the rate of growth of GNP, as measured by the Spearman rank correlation coefficient, was -0.59 during the 1973-79 period.

The experience of the newly-industrializing developing countries during the period under consideration also provides evidence on the responsiveness of exports and of import substitution to changes in real exchange rates as well as on the effects of changes in real interest rates and investment incentives on domestic savings and investment. It further appears that overvalued exchange rates and negative real interest rates, as well as large budget deficits and the resulting rapid inflation, tend to depress the rate of economic activity.

These findings have implications for the policy measures that may be taken in response to recent increases in oil prices. They indicate, first of all, the need to lessen the bias in the system of incentives against exports and in favor of import substitution. They further point to the need to maintain realistic exchange rates and interest rates, limit the budget deficit, and avoid using the proceeds of foreign borrowing to increase consumption and to carry out investments in industries that do not correspond to the country's comparative advantage. More generally, the findings suggest the need to reduce distortions in product and factor markets and to increase reliance on the market mechanism.

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