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ESSAYS IN DEVELOPMENT STRATEGY

Bela Balassa

INTERNATIONAL CENTER FOR ECONOMIC GROWTH

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Essays in Development Strategy

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International Center
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PREFACE

These essays by Bela Balassa constitute the fifth of the Center's Occasional Papers. The series features broad reflections by senior scholars and policymakers on major issues of economic development and policy application experiences.

Bela Balassa makes an important contribution to this series with his essays on the adverse effects of market distortions on the economic growth of developing countries, citing the experiences of both Latin America and Asia in relation to trade policy and factor markets. His work in the area of international trade, international finance, and economic development has produced twelve books and some 250 publications in professional journals. His contributions to the economics profession has earned him the presidency of two professional associations and several distinguished awards.

We believe these essays will make a timely and important contribution to our understanding of the problems that market distortions currently pose to developing countries.

Nicolás Ardito-Barletta
General Director
International Center
for Economic Growth

Panama City, Panama
September 1988

ABOUT THE AUTHOR

Bela Balassa has been professor of political economy at the Johns Hopkins University and consultant to the World Bank since 1966. Previously, he served as associate professor at Yale University, where he received his Ph.D. in Economics in 1959. Professor Balassa came to the United States in 1957 from his native Hungary, where he also received a doctorate at the University of Budapest. He has served as advisor and consultant to U.S. governmental agencies, U.N. organizations, the OECD, and various governments of developing countries. Among his many books on international trade, international finance, economic development, and planning, he has written *The Theory of Economic Integration* (1961), *Trade Prospects for Developing Countries* (1964), *The Structure of Protection in Developing Countries* (1971), *Development Strategies in Semi-Industrial Economies* (1982), *Toward Renewed Economic Growth in Latin America* (1986), and *Adjusting to Success: Balance of Payments Policy in the East Asian NICs* (1987).

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Essays in Development Strategy

INTRODUCTION

This study of the economic policies of developing countries focuses on the desirability of eliminating market distortions caused by government policies. Its purpose is to examine how policy-induced market distortions—whether in product markets or in factor markets—impede economic growth.

The first essay on product markets demonstrates how trade facilitates economic growth. Rapid export expansion, unencumbered by distortions in product markets, encourages economic growth both directly and indirectly by increasing the availability of foreign exchange for imports.

While the first essay focuses on distortions in product markets, the second examines the adverse effects of policy-induced distortions in factor markets— distortions that are found in both labor and capital markets. Policy-induced distortions observed in the labor markets of developing countries include regulations aimed at increasing job security, social security schemes, minimum wage legislation, taxation of labor income, and wage and employment policies in the public sector. Policy-induced distortions in capital markets, in turn, may

originate in financial policies or in tax policies. In both instances, the measures applied affect the rate of return on alternative investments in physical and financial assets, including money.

Distortions in one market, whether product or factor, will have effects on the other. Product-market distortions will create distortions in factor markets through their effects on factor prices, whereas factor-market distortions will cause distortions in product markets through their effects on the cost of production.

Historical experience suggests that government interventions in product and factor markets are interrelated and that this relationship has a bearing on the choice of development strategies. Thus, governments will be less inclined to intervene in factor markets if product markets are relatively undistorted lest export prospects be jeopardized. In turn, there will be less resistance to measures that distort factor markets if product-market protection insulates the domestic economy from foreign influences.

At the same time, the existence of factor-market distortions will affect the choice of policies applied to product markets. Distortions in factor markets will tend to discourage the adoption of an outward-oriented development strategy. Contrary to an inward-oriented development strategy, which favors import substitution and maintains a bias against exports, an outward-oriented development strategy provides similar incentives to exports and import substitution. Outward-oriented developing countries also maintain realistic exchange rates, whereas exchange rates tend to be overvalued by inward-oriented countries, who thereby discriminate against the production of traded goods. The success of an outward-oriented development strategy, therefore, depends upon the unhindered operation of factor markets. In particular, the impact of trade liberalization on exports depends upon the ability of capital markets to provide funds for export-oriented investments.

An outward-oriented development strategy thus permits a developing country to realize the benefits provided by international trade. This allows for the country to improve resource allocation as indicated by the theory of comparative advantage; to overcome the limitations of domestic markets in exploiting economies of scale and ensuring full capacity utilization; to generate competition and improvements in technology; to increase domestic savings and foreign direct investment; and to raise employment levels under conditions of unemployment.

The experiences of Latin American and East Asian countries support these propositions. While inward orientation in Latin America has been accompanied by considerable distortions in labor and in capital markets, outward orientation in East Asia has been associated with free labor markets and increased freedom of capital markets. The choice of each region's development strategy has influenced significantly the economic performance of the countries.

THE IMPORTANCE OF TRADE FOR DEVELOPING COUNTRIES

Participation in international trade provides a variety of benefits to developing countries. They may benefit from resource allocation according to comparative advantage, from exploitation of economies of scale and increased capacity utilization, from improvements in technology, from increases in domestic savings and foreign direct investment, and from increased employment.

In the early stages of development, countries will generally benefit from specializing in natural resource products. In the process of industrialization, it will be advantageous to concentrate first on products utilizing mainly unskilled labor, with subsequent upgrading in the product composition of exports as the country accumulates physical and human capital. International specialization according to the changing pattern of comparative advantage will bring important gains to developing countries; conversely, limiting participation in the international division of labor through high import protection can entail considerable losses.

The domestic markets of even the largest developing countries are relatively small. In regard to manufactured goods, where economies of scale can be obtained, India's market is smaller than that of Belgium, a country extensively engaged in international trade; and Brazil's is only one-sixth of that of Germany, for which trade has been of considerable importance.

International trade makes it possible for developing countries to overcome the limitations of their domestic markets in exploiting economies of scale and ensuring full capacity utilization, thereby avoiding the dilemma of building ahead of demand and operating with a low degree of capacity utilization or constructing less than optimal size plants.

But even in cases when a developing country's market can provide for the exploitation of economies of scale and full capacity utilization, it may not permit domestic competition, thus leading to the establishment of monopolies and oligopolies. It has often been observed that such firms prefer "quiet life" to innovative activity, which entails risk and uncertainty. In turn, the carrot and the stick of competition provide inducements for technological change. Exporting firms, in particular, try to keep up with modern technology in

order to maintain or improve their market position.

In generating higher incomes, participation in international trade will also lead to higher domestic savings, which will increase further to the extent that a higher than average share of incomes generated by exports is saved. Also, as export expansion improves the balance of payments, a country may become more attractive to foreign investments.

As long as labor is not fully employed, increases in output resulting from participation in international trade will benefit employment, when additional gains are obtained to the extent that exports are more labor intensive than import substitution. Higher employment, in turn, will contribute to increases in wages that tend to improve the distribution of income.

Having briefly indicated the benefits developing countries may obtain through international trade, this essay will provide an empirical and policy analysis of the principal issues involved. It will review past trends in developing country exports; present evidence on exports and on economic growth in developing economies following alternative development strategies; evaluate the effects of trade orientation on economic performance; and indicate the implications of the findings for trade liberalization in the framework of multilateral negotiations.

Changes in Trade Flows during the Postwar Period

The expansion of trade in major commodity groups. Table 1 provides information on the geographical and commodity composition of the exports of developed and developing countries in the years 1963, 1973 and 1984, expressed in 1975 prices.[1] In the entire 1963–84 period, the total exports of the developed countries increased nearly fourfold, whereas the developing countries experienced a less than two-and-a-half-fold rise. Closer inspection reveals, however, that these differences are in large part explained by differences in the commodity composition of exports.

Rapidly growing manufactured exports accounted for only one-fifteenth of the total exports of the developing countries in the base year, 1963, while manufactured products had a nearly two-thirds share in the exports of the developed countries. From this low base,

Table 1 **The Geographical and Commodity Composition of Exports, 1963, 1973 and 1984 ($ billion, 1975 prices)**

Origin/ Destination	Fuels			Nonfuel Primary Products			Manufactured Goods			Nonfuel Products			Total		
	DC	LDC	World	DC	LDC	World	DC	LDC	World	DC	LDC	World	DC	LDC	World
Absolute Values															
1963															
Developed Countries	16.5	2.1	19.6	52.5	10.2	66.2	99.7	36.1	136.5	152.2	46.3	210.7	168.7	48.4	230.3
Developing Countries	44.7	16.0	62.7	30.1	6.1	39.6	4.1	3.0	7.4	34.2	9.1	47.1	79.0	25.1	109.8
Market Economies	61.2	18.1	82.4	82.6	16.3	105.8	103.8	39.2	151.9	186.4	55.5	257.8	247.6	73.5	340.2
1973															
Developed Countries	28.8	1.9	32.7	82.8	14.7	104.9	299.9	78.5	397.9	382.7	93.1	502.9	411.5	95.0	535.5
Developing Countries	108.9	28.6	142.4	34.3	8.3	47.7	19.2	8.5	28.9	53.5	16.8	76.6	162.4	45.4	219.0
Market Economies	137.8	30.4	175.1	117.0	23.0	152.6	319.2	86.9	426.8	436.2	109.9	579.4	574.0	140.4	754.5
1984															
Developed Countries	44.6	3.7	50.5	126.2	37.7	178.2	476.3	154.0	661.8	602.5	191.7	840.0	647.1	195.4	890.5
Developing Countries	55.2	23.0	80.8	44.7	18.6	73.5	66.5	31.5	103.8	111.2	49.7	177.3	166.4	72.8	258.0
Market Economies	99.7	26.7	131.2	171.0	56.3	251.7	542.8	185.2	765.6	713.7	241.5	1017.3	813.5	268.2	1148.5
Percentage Change															
1963–73															
Developed Countries	75	-10	67	58	44	58	201	117	175	151	101	139	144	96	132
Developing Countries	143	79	127	14	37	20	367	179	288	56	84	63	106	81	99
Market Economies	125	69	113	42	41	44	208	122	181	134	98	125	132	91	122
1973–84															
Developed Countries	55	95	54	53	157	70	59	96	66	57	106	67	57	106	66
Developing Countries	-49	-19	-43	31	123	54	245	268	259	108	196	131	2	60	18
Market Economies	-28	-12	-25	46	145	65	70	113	79	64	120	76	42	91	52
1963–84															
Developed Countries	171	75	157	140	270	169	378	326	358	296	314	299	284	303	287
Developing Countries	23	44	29	48	205	86	1514	925	1294	225	443	277	111	190	135
Market Economies	63	48	59	107	246	138	423	373	404	283	335	295	228	265	238

Notes: The data have been expressed in constant prices by the use of deflators derived from price indices published in the United Nations, *Monthly Bulletin of Statistics*, which is also the source of the current price trade data. For primary products, the price indices for individual countries and commodity groups have been weighted by the commodity composition of exports for developing and for developed countries, respectively. For manufactured goods, use has been made of import price indices for the two groups of countries published in the above source.

The data pertain to the exports of fuels (SITC class 3), nonfuel primary products, including foods and beverages (SITC classes 0 and 1), industrial materials (SITC classes 2 and 4), and nonferrous metals (SITC category 68), manufactured goods (SITC categories 5 to 8 less nonferrous metals), nonfuel products (SITC classes 0 to 2 and 4 to 8), and total exports (SITC classes 0 to 8). They do not include SITC Class 9, commodities and transactions not classified according to kind, which rarely exceeds 2 percent of the total.

Under the UN classification scheme used in the table, developed countries are identified with the member countries of the OECD. Developing countries comprise the countries of Latin America, Africa (other than South Africa), and nonsocialist Asia (other than Israel and Japan); the rest of the world includes the socialist countries, Israel, and South Africa.

Source: United Nations, *Monthly Bulletin of Statistics*, various issues.

developing country manufactured exports rose fourteenfold between 1963 and 1984, reaching four-tenths of their total exports; in the same period, the developed countries increased these exports four-and-a-half times, approaching three-fourths of the total.

The growth of the developing countries' manufactured exports and their increasing share of total manufacturing exports—those of both developed and developing countries—grew from one-twentieth in 1963 to nearly one-seventh in 1984. This was the most important change in trade flows during the postwar period. It shows the extent of transformation in the export structure of the developing countries and the availability of markets in the developed countries for their manufactured exports.

At the same time, the developing countries lost market shares in the exports of nonfuel primary products. Thus, the near doubling of these exports between 1963 and 1984 compares with a more than two-and-a-half-fold increase for the developed countries. The results reflect the unfavorable commodity composition of developing country exports: they have had a much larger share in industrial materials, which experienced slow increases in world exports, than in foods and beverages, for which increases exceeded the average for nonfuel primary products.

Finally, whereas the fuel exports of the developing countries rose by less than one-third between 1963 and 1984, the developed countries increased these exports two-and-a-half times. Within this period, 1973 represents a turning point. While world fuel exports more than doubled between 1963 and 1973, they decreased by one-fourth between 1973 and 1984, largely because of the energy saving measures taken in response to the rapid increases in petroleum prices. The decline was even greater in the developing countries, whose 1984 fuel exports were less than three-fifths of the 1973 level, compared with an increase by one-half in the developed countries. Petroleum and gas discoveries in the United Kingdom, Norway, and the Netherlands and the substitution of coal for oil importantly contributed to these results.

Excluding fuels, differences in the growth of exports in developed and in developing countries are much reduced and, in the 1973–84 period, reversed. For the 1963–84 period, taken as a whole, nonfuel exports quadrupled in the developed countries and increased three-and-a-half times in the developing countries. But, while these exports rose two-and-a-half times in the developed countries and by only four-tenths in the developing countries between 1963 and 1973,

a two-thirds increase in the former group of countries was accompanied by a two-and-a-half fold rise in the latter between 1973 and 1984.

As increases in primary nonfuel exports were somewhat larger in the developed than in the developing countries during the second period, even though considerably reduced compared to the first, the observed results reflect differential rates of export expansion in manufactured goods. The developing countries increased these exports three-and-a-half times between 1973 and 1984, while the developed countries experienced only a two-thirds rise.

With the bulk of the developing country exports of manufactured goods destined for developed country markets, access to these markets was the major factor in the observed result. In fact, the share of the developed countries as markets for the exports of the developing countries rose during the 1963–84 period, and it exceeded two-thirds by 1984. However, developing country exports of fuels and of nonfuel primary products increased more rapidly to developing country markets than to markets in developed countries. All in all, the total exports of the developing countries to other developing countries nearly tripled between 1963 and 1984, while their exports to the developed countries slightly more than doubled. These numbers highlight the growing importance of trade between developing countries.

The relationship between trade and economic growth. The acceleration in the growth of the developing countries' nonfuel exports after 1973 is even more remarkable if account is taken of the slowdown of economic growth in the developed countries, where an average rate of GDP growth of 4.7 percent between 1963 and 1973 declined to a growth rate of 2.5 percent between 1973 and 1984. The nonfuel exports of developing countries to the developed countries grew at average annual rates of 5.3 and 8.3 percent in the two periods, respectively. The corresponding growth rates are 2.5 and 4.6 percent for nonfuel primary products[2] and 14.2 and 12.4 percent for manufactured goods (in the case of manufactured goods, the very low base year figure raised the growth rate in the first period).

The relationship between economic growth in the developed countries and their imports from the developing countries has been analyzed by the use of regression analysis, with the addition of price variables.[3] The estimates are reported in Table 2 for the entire 1963–84 period; the shortness of the time series limited the statistical significance of the estimates for the two subperiods.

Table 2 **The Effects of Developed Country GDP and Relative Prices on Their Imports from Developing Countries, 1963-84 (t-values in parentheses)**

Exports	Constant	Gross Domestic Product	Relative Prices	R^2	D.W.
Total exports	5.35 (8.06)**	1.47 (9.88)**	-0.29 (-3.52)**	0.897	0.49
Nonfuel primary exports	8.42 (56.61)**	0.48 (14.02)**	-0.43 (-6.86)**	0.909	1.27
Foods and beverages	7.17 (26.83)**	0.61 (10.07)**	-0.53 (-6.02)**	0.834	0.96
Industrial materials	8.33 (39.73)**	0.27 (5.66)**	-0.29 (-2.97)**	0.626	1.60
Nonferrous metals	5.06 (10.01)**	0.71 (6.38)**	-0.17 (-1.49)	0.767	1.23
Fuels	2.84 (1.42)	1.88 (4.21)**	-0.41 (-3.36)**	0.437	0.36
Manufactured exports	-7.10 (-14.95)**	3.84 (35.40)**	0.63 (-0.98)	0.984	0.54

Notes: All variables have been expressed in logarithmic terms. Relative prices have been defined as the ratio of the export prices of the particular product groups in the developing countries to the export prices of manufactured goods in the developed countries (for explanation, see text).

The symbol ** indicates that the results are statistically significant at the 1 percent level.

Sources: Export values and prices: United Nations, *Monthly Bulletin of Statistics* and *Yearbook of International Trade Statistics*, various issues. Gross domestic product: International Monetary Fund, *International Financial Statistics* 1985 yearbook.

The results show that a one percent increase in the gross domestic product of the developed countries was associated with a 1.5 percent rise in their total imports from the developing countries in the 1963–84 period. The corresponding estimates are 0.5 percent for nonfuel primary products, 1.9 percent for fuels, and 3.8 percent for manufactured goods. Disaggregating nonfuel primary exports, the results are 0.6 percent for foods and beverages, 0.3 percent for industrial materials, and 0.7 percent for nonferrous metals. All the estimates are statistically significant at the one percent level.

The empirical results further indicate the effects of changes in relative prices on the imports of the developed countries from the developing countries. This has been done by relating price indices for

developing country exports of various product groups to the price index of the developed countries' manufactured exports.

The estimates reported in Table 2 show that a one percent increase in developing country export prices, relative to the manufactured export prices of the developed countries, leads to a 0.3 percent decline in these imports. The corresponding estimates are 0.4 percent for nonfuel primary products, 0.5 for foods and beverages, 0.3 for industrial materials, and 0.4 for fuels. They are all statistically significant at the one percent level; however, the relative price variables are not significant for the imports of nonferrous metals and manufactured goods.[4]

It is apparent, then, that economic growth in the developed countries is associated with more than proportionate increases in their imports from the developing countries, with manufactured goods being much above and nonfuel primary products below the average. For reasons noted below, the rise in their exports, in turn, contributes to economic growth in the latter group of countries.

The latter relationship has been estimated for the 1973–84 period, with the addition of a relative price variable. The results show that a one percent increase in the exports of the developing countries to the developed countries raises the former's GDP growth rate by 0.73 percentage points. A one percent improvement in the terms of trade of the developing countries, measured as the ratio of their export prices to the manufactured export prices of the developed countries, adds another 0.47 percentage points to their GDP growth rate.[5]

Export performance for groups of developing economies. Further interest attaches to the export performance of different groups of developing economies. For this purpose, distinction has been made among newly-industrializing economies (NICs), newly-exporting countries (NECs), and less developed countries (LDCs), with a further breakdown based on geographical location. Table 3 provides the list of countries in the first two groups and reports the results obtained for the years 1963, 1973, and 1980.[6]

In an earlier study by the author, newly-industrializing countries were defined as countries having a share of manufactured value added of 20 percent or higher in the gross domestic product in 1977 and per capita incomes of at least $1100 in 1978.[7] The same list of countries is obtained by applying the 20 percent benchmark to 1984 and using a per capita income figure of $1700 for the year.[8]

Table 3 **Exports by Groups of Developing Economies, 1963, 1973, and 1980 ($ billion, 1975 prices, percent)**

	Fuels		Nonfuel Primary Products		Manufactured Goods		Nonfuel Products		Total	
	$billion	percent	$billion	percent	$billion	percent	$billion	percent	$billion	percent
1963										
(1) NIC Latin America	0.30	0.6	5.63	21.8	0.64	8.6	9.27	19.7	9.66	8.8
(2) Far East	1.30	2.1	1.91	7.4	2.38	32.2	4.29	9.1	5.59	5.1
(3) NEC Latin America	16.72	26.7	3.11	12.0	0.21	2.8	3.33	7.1	20.04	18.3
(4) North Africa-Middle East	0.33	0.5	1.83	7.1	0.27	3.6	2.10	4.5	2.43	2.2
(5) South Asia	0.11	0.2	3.38	13.1	1.70	23.0	5.08	10.7	5.16	4.7
(6) Far East	2.08	3.3	3.19	12.4	0.21	2.8	5.40	11.5	5.48	5.0
(7) Less Developed Countries	41.77	66.6	15.58	60.3	1.99	26.9	17.57	37.4	61.44	55.9
	62.70	100.0	99.60	100.0	7.40	100.0	47.00	100.0	109.80	100.0
1973										
(1) NIC Latin America	0.39	0.3	11.66	24.4	3.96	13.7	15.62	20.4	16.01	7.3
(2) Far East	2.53	1.8	2.90	6.0	14.61	50.5	17.51	22.9	20.04	9.2
(3) NEC Latin America	14.91	10.5	3.21	6.7	0.98	3.4	4.19	5.4	21.10	9.6
(4) North Africa-Middle East	0.80	0.6	1.92	4.0	0.64	2.2	2.56	3.3	3.36	1.5
(5) South Asia	0.39	0.3	2.40	5.0	2.76	9.5	5.16	6.7	5.55	2.4
(6) Far East	5.97	4.2	7.37	15.7	1.10	3.9	8.57	11.2	14.54	6.6
(7) Less Developed Countries	117.61	82.6	18.14	38.0	4.85	16.8	22.99	30.0	138.60	63.3
	142.40	100.0	47.70	100.0	28.90	100.0	76.60	100.0	219.00	100.0
1980										
(1) NIC Latin America	3.75	3.2	14.62	23.7	7.70	12.0	22.32	17.7	26.07	10.7
(2) Far East	1.78	1.5	4.85	7.8	35.44	55.8	40.59	32.3	42.37	17.3
(3) NEC Latin America	6.46	5.4	4.58	7.4	1.88	2.9	6.46	5.1	12.92	5.3
(4) North Africa-Middle East	1.11	0.9	1.77	2.9	1.19	1.9	2.96	2.4	4.07	1.7
(5) South Asia	0.13	0.1	2.98	4.8	4.11	6.4	7.09	5.6	7.22	3.0
(6) Far East	6.47	5.4	5.41	8.8	3.22	5.8	9.13	7.3	10.60	6.4
(7) Less Developed Countries	98.90	83.4	27.56	44.6	9.68	15.1	37.25	29.6	1326.15	55.7
	118.60	100.0	61.80	100.0	64.00	100.0	125.80	100.0	244.40	100.0

Note: (1) Argentina, Brazil, Chile, Mexico, Uruguay, (2) Hong Kong, Korea, Singapore, Taiwan, China, (3) Colombia, Costa Rica, Guatemala, Jamaica, Peru, Venezuela; (4) Egypt, Jordan, Morocco, Tunisia; (5) Bangladesh, India, Pakistan, Sri Lanka; (6) Indonesia, Malaysia, Philippines, Thailand. (7) The difference between the total exports of the developing countries shown in Table 1, and the sum of exports of country groupings (1) to (6).

Sources: Table 1 and World Bank data base.

The newly-exporting countries have been defined by the joint requirement that the share of manufacturing value added in GDP was at least 15 percent or manufactured goods accounted for at least 30 percent of total exports in 1984 and manufactured exports reached $250 million, i.e., 0.03 percent of world manufactured exports, and 0.2 percent of manufactured exports by the developing countries, in 1984.[9]

Limiting attention to nonfuel products, the results show that the market share of the Far Eastern NICs (Hong Kong, Korea, Singapore, and Taiwan, China) in the combined exports of the developing countries rose from 9.1 percent in 1963 to 22.9 percent in 1973, and, again, to 32.3 percent in 1980. All other groups lost export market shares during this period. The losses were particularly pronounced in the South Asian NECs (Bangladesh, India, Pakistan, and Sri Lanka), the market share of which decreased from 10.7 percent in 1963 to 5.6 percent in 1980, followed by the North African and Middle Eastern NECs (Egypt, Jordan, Morocco, and Tunisia) where the decline was from 4.5 to 2.4 percent.

Among major product groups, changes in export market shares were the largest for manufactured goods. Although the Far Eastern NICs had a relatively high export share of 32.2 percent in these products already in 1963, they increased this share to 55.8 percent by 1980. In the same period, the market share of the South Asian NECs fell from 23.0 to 6.4 percent, with a decline from 3.6 to 1.9 percent observed in the North Africa–Middle East group.

In turn, the Latin American NICs (Argentina, Brazil, Chile, Mexico, and Uruguay) and, in particular, the Far Eastern NECs (Indonesia, Malaysia, Philippines, and Thailand) were gainers, with increases in manufactured export market shares from 8.6 percent in 1963 to 12.0 percent in 1980 in the first case and from 2.8 to 5.8 percent in the second. But while in the Latin American NICs the 1980 result represented a deterioration following the progress made between 1963 and 1973, the growth of the exports of the Far Eastern NECs accelerated after 1973. Finally, increases between 1963 and 1973 were undone afterwards in the Latin American NECs (Colombia, Costa Rica, Guatemala, Peru, and Venezuela).

The Far Eastern NICs also made the largest gains in nonfuel primary products, with their export market share rising from 4.8 percent in 1963 to 7.8 percent in 1984. The South Asian NECs again

experienced the largest losses in market shares, from 8.5 to 4.8 percent, followed by the North African and Middle Eastern NECs, where the decline was from 4.6 to 2.9 percent. Smaller changes occurred in the other country groups.

These developments are closely linked to the policies applied by the various countries. The Far Eastern NICs began a policy of outward orientation[10] in the early 1960s and continued with this policy afterwards. The South Asian NICs, however, persisted with highly protectionist inward-oriented policies. In the North Africa–Middle East area, the unfavorable results were dominated by Egypt, which failed to utilize productively the bonanza provided by increased oil earnings, toll receipts from the Suez Canal, and workers' remittances from the Middle East.

During the period under consideration, the increased outward orientation of the Far Eastern NICs accounts for the acceleration of the growth of their manufactured exports, while changes in the policies applied explain the reversal in manufactured export market shares in Latin America. These countries reformed their economic policies after the mid-1960s, involving a (partial) shift from inward to outward orientation, but again turned inward after 1973, with Brazil providing a partial exception.

The preceding discussion concerned six developing country groups, defined according to their level of economic development and geographical location. While the remaining group of less developed countries is too heterogeneous to derive any firm conclusions, it may be observed that increases in their market shares in nonfuel primary products were more than offset by declines in manufactured export shares.

The next section will consider individual country experiences with economic policies and the effects of these policies on exports and economic growth during the postwar period. As an introduction to the discussion, the concepts of outward and inward orientation will be defined.

Trade Orientation and Economic Growth

Defining inward and outward orientation. In examining the postwar experience of developing economies with alternative policies,

distinction may be made between inward-oriented and outward-oriented development strategies. Inward-oriented developing countries have protected their domestic industries by the use of tariffs and quantitative import restrictions without providing commensurate export subsidies. The application of these measures has biased the system of incentives in favor of import substitution and against exports. By contrast, under outward orientation, similar incentives have been granted to import substitution and exports, with export subsidies offsetting, on the average, the effects of import protection.

Outward-oriented developing countries have also maintained realistic exchange rates, and avoided variations in real exchange rates (nominal exchange rates, adjusted for changes in relative prices at home and abroad) over time, so as to encourage exports. Conversely, exchange rates have often been overvalued in developing countries pursuing inward-oriented policies, with the degree of overvaluation varying over time, as intermittent devaluations periodically caught up with domestic inflation, thereby creating uncertainty for exporters.

In addition to fluctuations in the extent of overvaluation leading to changes in incentives over time, there has been considerable variation in incentives among manufacturing industries in inward-oriented developing countries, which has not generally been the case under outward orientation. Also, inward-oriented, but not outward-oriented, developing countries have generally discriminated against agriculture.

The described characteristics of outward-oriented and inward-oriented development strategies are exemplified by the experience of the last quarter of a century. In the 1960–73 period of rapid growth in the world economy, a contrast may be drawn among three groups of developing countries: those pursuing outward-oriented policies, inward-oriented developing countries undertaking policy reforms, and developing countries characterized by continued inward orientation. The choice between outward and inward orientation has further relevance in the period of external shocks, owing to increases in oil prices and recessionary conditions in the world economy after 1973. The following discussion concentrates on nine developing economies that established basic industries and may be considered representative of alternative policy regimes.

The period of rapid world economic growth (1960–73). [11] Among the nine developing countries under consideration, Korea,

Singapore, and Taiwan adopted outward-oriented policies in the early 1960s. In turn, India, Chile, and Uruguay continued with inward-oriented policies throughout the 1960–73 period. An intermediate position was taken by Brazil, and to a lesser extent, by Argentina and Mexico, which had followed inward-oriented policies, but undertook policy reforms in the mid-1960s, reducing the extent of discrimination against agriculture and, in particular, against manufactured exports.

At the same time, there were several important differences between the policies applied by the three Far Eastern and the three Latin American developing countries. These differences largely reflected the fact that the latter group of countries endeavored to maintain the high-cost industries, which had earlier been established, following the policy reforms.

In the three Far Eastern developing countries, exporters were free to choose between domestic and imported inputs; they were exempted from indirect taxes on their output and inputs; and they paid no duty on imported inputs. The same privileges were extended to the producers of domestic inputs used in export production, thus providing essentially free trade treatment to the export sectors. With additional subsidies and low import protection, exports in the manufacturing sector received, on the average, similar incentives as import substitution in these countries. At the same time, there was little discrimination against primary exports, and against primary activities in general, and the system of incentives was quite uniform.

In reforming their system of incentives, the three large Latin American developing countries reduced the extent of import protection. They did not provide, however, exporters with a free choice between domestic and imported inputs. Rather, in order to safeguard existing industries, exporters were required to use domestic inputs produced under protection. To compensate exporters for the resulting excess cost, the three Latin American countries granted export subsidies, but these were not sufficient to provide producers with export incentives comparable to the protection of domestic markets. Thus, a bias continued in favor of import substitution and against exports, in particular traditional primary exports, albeit to a lesser extent than had been previously the case.

Among developing countries that continued with a policy of inward orientation, Chile traditionally had the highest level of import

protection in Latin America and, after brief experimentation with import liberalization, reimposed quantitative restrictions in the early 1970s. Protection levels also remained high in Uruguay, and little effort was made to promote exports. Finally, the introduction of selected export subsidies in the mid-1960s was far overshadowed by the continued use of import prohibitions and investment controls in India.

The system of incentives applied importantly affected export performance in the three groups of developing countries. The share of exports in manufactured output rose in Korea from 1 percent in 1960 to 14 percent in 1966 and to 41 percent in 1973, in Singapore from 11 percent to 20 percent and to 43 percent, and in Taiwan from 9 percent to 19 percent and to 50 percent.

After slow increases in the 1960–66 period, the growth of manufactured exports accelerated between 1966 and 1973 in the three Latin American economies that reformed their system of incentives during this period. In particular, the share of exports in manufactured output rose from 1 percent in 1966 to 4 percent in 1973 in both Argentina and Brazil, with smaller increases occurring from a higher initial level in Mexico—which is explained by its common border with the United States.

Chile, Uruguay, and India, which continued with their inward-oriented development strategies, experienced a decline in the share of exports in manufacturing output. India lost ground in textiles, its traditional exports, and was slow in developing new manufactured exports. As a result, its share in the combined exports of manufactured goods of the nine countries under consideration declined from 57 percent in 1963 to 13 percent in 1973. In the same period, Chile's share fell from 2 percent to below one half of one percent, while Uruguay's share declined to the same level from one percent in 1963.

In turn, the three Far Eastern developing countries increased their combined market share in the manufactured exports of the nine developing countries under consideration, from 17 to 60 percent; and the combined share of the three Latin American countries rose slightly, from 23 to 24 percent between 1963 and 1973. The Far Eastern developing countries also gained market shares in nonfuel primary exports; gains in Brazil were approximately offset by losses in Argentina and Mexico; and India, Chile, and Uruguay all experienced losses in nonfuel primary exports (Table 4).[12]

Table 4 **Exports by Selected Developing Economies ($ million, 1975 prices)**

	Fuels		Nonfuel Primary Products		Manufactured Goods		Nonfuel Products		Total	
	$	%	$	%	$	%	$	%	$	%
1963										
Korea	17	1.0	97	0.9	84	3.3	181	1.4	198	1.3
Singapore	1207	69.2	78	0.7	73	2.9	151	1.1	1358	9.1
Taiwan, China	21	1.2	584	5.5	272	10.8	856	6.5	877	5.9
Argentina	74	4.2	2641	24.9	169	6.7	2810	21.4	2884	19.4
Brazil	62	3.6	2941	27.7	90	3.6	3031	23.1	3094	20.8
Mexico	256	14.7	1461	13.7	316	12.6	1777	13.5	2033	13.7
India	107	6.1	1562	14.7	1448	57.5	3007	22.9	3114	20.9
Chile	0	0.0	998	9.4	45	1.8	1044	8.0	1044	7.0
Uruguay	1	0.1	264	2.5	17	0.7	275	2.1	277	1.9
Total	1745	100.0	10626	100.0	2511	100.0	14132	100.0	14879	100.0
1973										
Korea	117	4.0	541	3.8	3180	22.3	3721	13.2	3838	12.3
Singapore	2269	76.9	121	0.9	1176	8.3	1297	4.6	3567	11.4
Taiwan, China	46	1.6	899	6.4	4321	30.4	5220	18.4	5266	16.9
Argentina	19	0.6	2587	18.4	860	6.0	3447	12.2	3465	11.1
Brazil	276	9.3	5499	39.1	1433	10.1	6932	24.5	7208	23.1
Mexico	82	2.8	1653	11.7	1299	9.1	2952	10.4	3035	9.7
India	131	4.4	1586	11.3	1838	12.9	3424	12.1	3555	11.4
Chile	9	0.3	970	6.9	54	0.4	1025	3.6	1033	3.3
Uruguay	3	0.1	217	1.5	61	0.4	278	1.0	281	0.9
Total	2952	100.0	14073	100.0	14222	100.0	28296	100.0	31248	100.0
1980										
Korea	11	0.2	1036	5.3	9844	28.8	10879	20.3	10891	18.4
Singapore	1596	29.2	348	1.7	3035	8.9	3383	6.3	4979	8.4
Taiwan, China	97	1.8	1280	6.5	10982	32.2	12262	22.8	12359	20.9
Argentina	95	1.7	3722	19.0	1170	3.4	4892	9.1	4987	8.4
Brazil	122	2.2	6691	34.2	4721	13.8	11412	21.2	11534	19.5
Mexico	3510	64.3	1868	9.5	1084	3.2	2939	5.5	6459	10.9
India	11	0.2	1845	9.4	2775	8.1	4621	8.6	4632	7.8
Chile	20	0.4	2389	12.2	263	0.8	2652	4.9	2672	7.8
Uruguay	0	0.0	404	2.1	253	0.7	657	1.2	657	1.1
Total	5462	100.0	19870	100.0	34137	100.0	54007	100.0	59470	100.0

Source: See Table 1

The experience of the nine developing countries provides further evidence of the favorable effects of outward orientation on economic growth during the period preceding the 1973 oil crisis. The three Far Eastern countries had by far the highest GNP growth rates throughout the period; the three Latin American developing countries that undertook policy reforms improved their growth performance to a considerable extent after the reforms were instituted; and Chile,

Uruguay, and India remained at the bottom on the growth league. For the 1960–73 period, taken as a whole, per capita incomes rose at rates ranging between 6 and 8 percent in the first group, between 3 and 4 percent in the second, and between 1 and 2 percent in the third.

The period of external shocks (1973–85).[13] Developing countries experienced substantial external shocks between 1973 and 1983. In the first half of the period, the quadrupling of oil prices was accompanied by a world recession and followed by a slow recovery. In the second half, oil prices increased three times; the developed countries again experienced a recession, and interest rates increased considerably. At the same time, policy responses to these shocks in the individual countries varied greatly.

The three Far Eastern developing countries continued with their outward-oriented development strategy. They were joined by Chile and Uruguay, which, however, again introduced price distortions after mid-1979, when their exchange rates became seriously overvalued. In turn, after earlier efforts made to reduce the bias of the incentive system against exports, Argentina and Mexico, and to a lesser extent Brazil, increased the degree of inward orientation, while India continued with its inward-oriented stance.

Outward-oriented developing countries maintained realistic exchange rates, with little variation over time, whereas exchange rates were generally overvalued in inward-oriented countries, with the degree of overvaluation varying during the period. This explains why outward-oriented countries continued to gain export market shares in nonfuel exports, while inward-oriented countries experienced losses in foreign markets (as shown in Table 4, in the case of Brazil losses in nonfuel primary exports offset gains in manufactured goods).

We also find that more import substitution occurred in outward-oriented than in inward-oriented developing countries during the 1973–83 period. Various considerations may explain this result, which is prima facie surprising. To begin with, the former, but not the latter, group of developing economies maintained realistic exchange rates, which contributed to export expansion, as well as to import substitution. Also, the exploitation of economies of scale in the export industries of outward-oriented developing countries permitted replacement of imports by domestic production in these industries, while import replacement became increasingly costly, and net import savings declined under continued inward orientation. Finally, the

virtual lack of discrimination in the system of incentives against agriculture in outward-oriented countries allows import substitution to occur in this sector, which is not the case under inward orientation.

Outward-oriented developing countries thus undertook domestic adjustment through output-increasing policies of export expansion and efficient import substitution, which was not the case under inward orientation. At the same time, the former group generally eschewed highly capital-intensive projects that in inward-oriented developing countries were undertaken by the public sector and by the greatly protected private sector.

While, owing to their greater exposure to foreign markets, external shocks were considerably larger in outward-oriented than in inward-oriented developing countries, these differences were offset several times by differences in economic growth rates. Notwithstanding the external shocks they suffered, average per capita GDP growth rates remained at 5 percent a year between 1963–73 and 1973–79 in outward-oriented developing countries, while growth rates declined from 5 to 3 percent in inward-oriented economies. (Apart from the developing economies referred to above, the latter group includes Israel, Portugal, Turkey, and Yugoslavia.)

These results obtained despite heavy borrowing abroad by inward-oriented developing countries which, however, generally failed to use the borrowed funds efficiently. In particular, slow increases in exports led to a substantial rise in the debt-export ratios of inward-oriented countries, while this ratio remained approximately unchanged in outward-oriented countries.

Correspondingly, increases in world interest rates bore greatly on inward-oriented developing countries, necessitating the application of deflationary policies that led to stagnation in their per capita incomes in the 1979–82 period. And while outward-oriented developing countries also applied deflationary measures on a temporary basis, with their per capita GDP growth rates declining to 2 percent in 1979–82, they rebounded again in subsequent years. Between 1982 and 1985, per capita GDP growth rates averaged 4 percent in outward-oriented countries, as compared to a slight decrease in inward-oriented countries, which had to pay the price for their excessive indebtedness.

The overall conclusions reached in regard to the two groups of developing countries neglect the variety found within each. Among

Latin American countries, particular interest attaches to Chile, where two important policy shifts were undertaken within a short period. Note may further be taken of the experience of Turkey, where the adjustment policies applied permitted moving from virtual bankruptcy to creditworthiness for commercial bank lending within a few years.

The September 1973 military takeover found Chile with a 500 percent rate of inflation and economic stagnation in a highly regimented economy. The situation was further aggravated as the quadrupling of oil prices was accompanied by a substantial fall in the price of copper. The Pinochet government applied strong deflationary measures to cope with the situation, which led to a large decline in national income. It subsequently undertook a far-reaching policy reform, representing a shift from inward to outward orientation. [14]

Following the turn towards outward orientation, Chile reached one of the highest per capita GNP growth rates, 7 percent, among developing economies in the 1976–79 period, although this result represented in part a reversal after the earlier decline. Rapid economic growth was supported by export expansion as the policies applied led to considerable increases in nontraditional exports.

A policy change occurred in mid-1979, however, when Chile fixed its exchange rate in terms of the U.S. dollar, supposedly forever, and simultaneously reinforced the indexation of wages. Between June 1979 and October 1981, average wages doubled as a result, while the exchange rate remained unchanged, compromising the competitive position of Chilean export and import-substituting activities in agriculture as well as in manufacturing. At the same time, under the virtual exchange rate guarantee, a large inflow of foreign capital ensued as domestic inflation rates exceeded foreign interest rates by a considerable margin, and the resulting negative real interest rates provided inducements for borrowing abroad. Since the production of goods entering into international trade became increasingly unprofitable, the borrowed funds were used to increase consumption and to invest in luxury housing and the stock market.

The resulting artificial boom came to an end in early 1982 as it became apparent that Chile could no longer continue financing its growing balance-of-payments deficit. Several devaluations were undertaken in succession, but the large burden of the foreign debt and the greatly weakened condition of domestic financial institutions will

make it difficult for Chile to return to the growth path of the years 1976–79 for some time to come.

The moral of the story is summarized in a recent article on "Policy Experiments in Chile, 1973–83" by the author. The article concludes that "liberalization in Chile was perverted by increasing price distortions after 1979," adding that "it will be inappropriate, however, to declare the experience of the entire decade a failure, when it is a policy reversal that led to the predicament in which Chile now finds itself."[15]

Turkey was practically bankrupt in 1979 and, with increasing foreign exchange stringency, it experienced considerable shortages of energy, raw materials, and spare parts. Industrial output declined and inflation accelerated as a result. This was the consequence of excessive borrowing and the use of borrowed funds in inefficient investment projects in the public sector as well as in the highly protected private sector.

The January 1980 policy reforms aimed at redressing the situation and changing the inward-oriented development strategy Turkey had followed in the previous decades.[16] While the reform measures had to be carried out in a deflationary environment, exports rose rapidly, leading to the resumption of economic growth.[17] Rapid export expansion, in turn, provided a boost to economic growth in Turkey, with per capita GNP rising at an average annual rate of 2 percent between 1980 and 1985. In addition, inflation rates declined from 140 to 40 percent, although further decreases are desirable.

Turkey provides an example of successful adjustment through export expansion. Apart from the resumption of economic growth, Turkey again became creditworthy for borrowing from commercial banks. This is the more remarkable since Turkey was one of the most inward-oriented countries in the developing world, with an export-GNP share of only 3 percent in 1979. The turn towards outward orientation meant that this share reached 15 percent in 1985.

Export Expansion and Economic Performance

Exports and economic growth. The experiences of developing countries discussed in the previous section of the essay indicate the favorable effects of exports on economic growth. This conclusion has been confirmed by a statistical analysis of the results obtained for

these countries. The estimates, made in an intercountry framework, show a high correlation between the growth of exports and that of production in agriculture and manufacturing, as well as in the national economy taken as a whole.[18] In the latter case, it has also been shown that the growth of exports is highly correlated with the growth of GNP less exports, indicating the indirect effects of exports on the rest of the economy.[19]

Estimates made by Anne Krueger[20] for a partially overlapping group of developing economies[21] confirm these results. She has found that, in the 1954–71 period, Brazil's 25 percent rate of growth of exports increased its GNP growth rate by 2.75 percentage points while Korea's 40 percent rate of growth of exports raised its GNP growth rate by 4.4 percentage points. In turn, for a group of 31 semi-industrial economies Feder has estimated that shifting resources from nonexport to export industries caused a 1.8 percentage point difference in GNP growth rates in the 1964–73 period.[22]

Explaining GNP growth in terms of export growth omits the effects of other economic variables. Michalopoulos and Jay have endeavored to remedy this deficiency by introducing data on labor and capital, in addition to exports, to explain intercountry differences in GNP growth rates. Using data for 39 developing economies, these authors have found that intercountry differences in the growth of labor and in domestic and foreign investment explain 53 percent of intercountry variations in GNP growth rate, while adding export growth increases this ratio to 71 percent.[23] Similar results have been reached by applying this procedure to the combined 1960–66 and 1966–73 data for the developing economies referred to above.[24]

The cited estimates refer to the period of rapid growth in the world economy. Further interest attaches to the question of how these results hold up in the subsequent period of external shocks. Applying the same procedure to the 1973–78 period, the earlier findings on the importance of exports for economic growth have again been confirmed.[25]

Data available for 43 developing economies have permitted further analyses of the implications for economic growth of trade orientation at the beginning of the period of external shocks and of policy responses to external shocks in the 1973–78 period. The extent of trade orientation in the initial year has been defined in terms of deviations of actual from hypothetical per capita exports, the latter

having been estimated by reference to per capita incomes, population, and the ratio of mineral exports to GNP. In turn, alternative policy responses have been defined as export promotion, import substitution, and additional net external financing.[26]

The impact of trade orientation on economic growth is indicated by the existence of a difference of 1 percentage point in GNP growth rates between developing countries in the upper quartile and the lower quartile of the distribution in terms of trade orientation, corresponding to the median among outward-oriented and inward-oriented countries, respectively. Furthermore, a difference of 1.2 percentage points in GNP growth is obtained in comparing the upper and the lower quartiles of the distribution as regards reliance on export promotion, as against import substitution and additional external financing.

The results are cumulative, indicating that both initial export orientation and reliance on exports in response to external shocks importantly contributed to economic growth in developing economies during the period under consideration. These factors explain a large proportion of intercountry differences in GNP growth rates in the 1973–78 period, with a difference of 3.2 percentage points between the upper quartile and the lower quartile of the distribution in the 43 developing economies.

Factors affecting economic growth. The results show that export expansion favorably affects economic growth in developing economies. As noted in the introduction to this essay, this may be explained by reference to gains from resource allocation according to comparative advantage, the exploitation of economies of scale and increased capacity utilization, improvements in technology, and increases in domestic savings and foreign direct investment under an outward-oriented development strategy. There may be further gains through increased employment if labor is not fully employed.

The obverse of gains from specialization is the cost of protection incurred under inward orientation. For the first half of the 1960s, this cost, including monopoly profits, has been estimated at 9.5 percent of GNP in Brazil, 6.2 percent in Chile, 6.2 percent in Pakistan, and 3.7 percent in the Philippines. The estimated cost was 2.5 percent of GNP for Mexico, which had relatively low levels of protection in 1960, the year of the estimate.[27] Furthermore, Krueger has concluded that the reallocation of resources from import substitution to export industries

under free trade would lead to a doubling of the world market value of manufacturing production in Turkey. With manufacturing industries accounting for one-seventh of GNP, this is equivalent to a cost of protection of 7 percent of Turkey's GNP.[28]

These estimates do not take account of the effects of protection on the prices of the factors of production, capital, and labor. To do so, general equilibrium estimates are needed. Such estimates have first been made for Colombia, which had protection levels comparable to Mexico, for the year 1970. The cost of protection has been estimated at 3.8 percent of GNP under full employment assumptions and 5.8 percent if labor is available at a constant real wage.[29]

There are several more recent estimates derived in a general equilibrium framework. Grais, de Melo, and Urata have estimated the cost of protection for Turkey in 1978 (i.e., prior to the 1980 reforms) at 5.5 percent of GDP, by taking account of the implications of quantitative import restrictions.[30] And while, according to Keyzer, tariff reductions would hardly affect GDP in Bangladesh, his results are vitiated by neglecting quantitative import restrictions that are pervasive in Bangladesh and by excluding changes in production structure in response to tariff reductions—truly, Hamlet without the Prince.[31]

None of these estimates consider the gains obtainable through the exploitation of economies of scale under outward orientation, which permits overcoming the limitations of small national markets. These have been incorporated in a general equilibrium model estimated by Harris. The results show a 3.6 percent increase in GNP associated with the unilateral elimination of Canada's relatively low tariffs, with the bulk of the gain attributed to economies of scale.[32]

Gains from economies of scale under increased outward orientation can be expected to be greater in developing economies. With the exception of Brazil, these economies have smaller domestic markets for manufactured goods, where economies of scale are important, than does Canada; and their protection levels are considerably higher.

Exporting also permits increased capacity utilization. In fact, in the small domestic markets of the developing countries, the choice often is between building ahead of demand and operating with a low degree of capacity utilization or constructing less than optimal size plants. This dilemma arises under traditional economies of scale, which entail reductions in production costs with increases in plant

size in industries producing standardized products, such as steel, copper, and newsprint.

Other forms of economies of scale include cost reductions obtainable through horizontal specialization (involving reductions in product variety as in the case of machine tools) and vertical specialization (involving the manufacture of parts, components, and accessories in separate establishments as in the case of automobiles) in differentiated products.

At the same time, according to the time-honored infant industry argument, incurring the cost of protection will be warranted as long as subsequent improvements in productivity offset this cost. But high protection may have the opposite effect by limiting competition in the small domestic markets of the developing countries, as the resulting monopolies and oligopolies will often prefer "quiet life" to innovative activity, which entails risk and uncertainty. In turn, the carrot and the stick of competition will provide inducements for technological change under outward orientation. Exporting firms, in particular, try to keep up with modern technology in order to maintain or improve their market position.

These conclusions are supported by empirical evidence. Thus, export expansion has been shown to be positively, and import substitution negatively, correlated with changes in total factor productivity (i.e., the productivity of the factors of production combined) in 13 Korean, Turkish, and Yugoslav industries during the period preceding the quadrupling of oil prices in 1973.[32]

The results obtained for Turkey confirm the conclusions reached earlier by Krueger and Tuncer for this country.[33] Also, India, which had a particularly pronounced inward orientation during the postwar period, experienced a decline in total factor productivity between 1959–60 and 1979–80.[34] The same result has been obtained in an unpublished World Bank study for Mexico for the 1970–82 period, when the economy became increasingly outward-oriented.

The advantages of outward orientation are also apparent from comparisons of estimates of total factor productivity for 20 developing economies covering the postwar period. Thus, Chenery[35] reports that total factor productivity increased at annual rates of over 3 percent in outward-oriented economies,[36] while increases were 1 percent or less in countries with especially pronounced inward orientation.[38]

In generating higher incomes, outward orientation would raise

domestic savings. Assume, for example, that the incremental capital-output ratio (the relationship between an increment in the capital stock to that of output) is 4; the average domestic savings ratio is 16 percent; and the marginal savings ratio is 33 percent. Eliminating protection, taken to represent a loss of 6 percent of GNP, would now raise the rate of economic growth from 4.0 to 4.5 percent by increasing the amount saved.

This conclusion is supported by estimates of Mercenier and Waelbroeck, who also include the rise in investment owing to the increased imports of capital goods in the event of trade liberalization.[39] According to their results, a unilateral tariff cut by 50 percent would increase GNP by 0.9 percent in the low-income, and by 1.9 percent in the middle-income, oil-importing developing economies excluding, and by 2.1 and 4.3 percent including, savings and investment effects.[40]

Domestic savings would increase further if a higher than average share of incomes generated by exports were saved. This proposition has received support from a cross-section study of 14 developing economies by Weisskopf, who has found a positive correlation between exports and domestic savings.[41] Weisskopf's results have been confirmed by Papanek in a cross-sectional analysis of 34 developing economies for the 1950s, and 51 developing countries for the 1960s.[42]

A positive correlation between exports and domestic savings has also been found in a time-series analysis of four developed and eight developing economies by Maizels for the early post–World War II period extending to 1962.[43] Maizels' sample includes India; for the same country Bhagwati and Srinivasan have obtained inconclusive results in a comparative study of ten industries for the 1950s and 1960s.[44] Given India's orientation toward import substitution during the entire period, however, the lack of clear-cut results in an interindustry framework may not modify the cross-sectional and time-series results obtained for the developing economies cited above.[45]

As export expansion improves the balance of payments, a country may become more attractive to foreign investors. While Weisskop and Papanek have found a negative correlation between domestic and foreign savings, Grinols and Bhagwati have brought into question the validity of these results.[46] Furthermore, on the basis of the experience of the developing economies included in the NBER project, Bhagwati

has concluded in regard to the application of an export promotion (EP) strategy that a "substantial inflow of foreign capital seems to attend such a strategy [and that] this inflow is not exogenous to the EP strategy, as is sometimes assumed, but can be seriously argued to be a result in large part of the EP strategy itself."[47]

Trade orientation, employment, wages, and income distribution. As long as labor is not fully employed, the rapid growth of output under an outward-oriented strategy benefits employment, and additional gains are obtained to the extent that exports are more labor intensive than import substitution. However, these gains are reduced in the event that outward orientation leads to more rapid increases in labor productivity than would otherwise be the case.

Banerji and Riedel have analyzed the effects of these factors on industrial employment in Taiwan and India. Their results indicate that the favorable effects of rapid output growth on employment were enhanced by the shift towards labor-intensive export activities in the first case, while output rose at a slower rate and a shift occurred towards relatively capital-intensive import-substituting activities in the second. With higher productivity growth, industrial employment grew at an average annual rate of 8 percent between 1954 and 1971 in the former case, and 2 percent a year between 1950 and 1969 in the latter.[48]

Furthermore, in a comparative study of eight inward-oriented developing economies, Anne Krueger has found that considerable employment gains may be obtained through a shift from import substitution to export orientation.[49] These gains, calculated by the use of labor input coefficients for individual sectors, varied between 21 and 107 percent, with results for Indonesia and Thailand exceeding 100 percent.[50]

Fields has examined the employment effects of outward orientation in the Far East. He found that, between the early 1960s and the early 1970s, unemployment rates declined from 8 to 4 percent in Korea, and from 6 to 2 percent in Taiwan; little change occurred in these rates in subsequent years of outward orientation.[51] Also, Carvalho and Haddad have shown that greater outward orientation in Brazil after the mid-1960s led to a 27 percent increase in the labor-intensity of exports relative to import substitution in Brazil.[52]

Apart from its impact on economic growth and on the interindustry allocation of the factors of production, trade orientation will affect

employment through changes in factor prices. Under inward orientation capital goods are underpriced both because the exchange rate is overvalued, and because tariffs on capital goods tend to be low or nonexistent.

Among countries for which estimates have been made, the elimination of protection would reduce capital costs by 30 to 40 percent in Chile, Pakistan, and Turkey, and by 8 percent in Argentina.[5] As a one percent change in the relative prices of capital and labor has been shown to be associated with a one percent change in the use of labor relative to capital,[6] eliminating this distortion would lead to increases in employment commensurate with the rise in the relative cost of capital.

With the growth of employment, real wages increased considerably in outward-oriented economies where exports expanded rapidly. This increase reflects the fact that the rate of growth of the demand for labor on the part of the manufacturing sector exceeded the rate of growth of the supply of labor to this sector. As a result, between 1966 and 1973, real wages in manufacturing doubled in Korea and increased by nearly three fifths in Taiwan. Also, real wages in manufacturing rose by three tenths in Brazil after its shift towards increased outward orientation. In turn, real wages declined by one-tenth in India between 1966 and 1973, which continued with inward-oriented policies during this period.

The described tendencies continued during the period of external shocks. Between 1973 and 1983, real wages more than doubled in Korea and nearly doubled in Taiwan, while Argentina and Mexico experienced a decline and in no major Latin American developing economies did real wages increase by as much as one-half.[7]

Rapid increases in wages, together with the growth of agricultural incomes, contributed to the rise of incomes of the poor. In fact, in the two cases where export promotion began earliest and was the most far-reaching, income inequalities were reduced. Thus, the Gini coefficient, measuring the extent of income inequality, declined from 0.37 in 1964 to 0.35 in 1970 in Korea, and from 0.33 in 1964 to 0.31 in 1973 in Taiwan. Also, in Korea, between 1964 and 1972, the incomes of the poorest 60 percent of the population grew 40 percent faster than the national average.[8]

Myint has further compared the experiences of Korea and Sri Lanka, which may be considered as archetypes of outward- and

inward-oriented countries. Based on work by Surjit Bhalla, Myint reports that the decline of exports was associated with a one-fifth percent fall in per capita incomes in terms of purchasing power parities between 1960 and 1977 in Sri Lanka, where the number of people living below the poverty line actually increased. In the same period, per capita incomes more than tripled in Korea, leading to a substantial fall in the number of people living below the poverty line.[38]

Improvements have occurred in Sri Lanka following the policy reforms undertaken in 1977, which have involved a move towards outward orientation. Between 1977 and 1984, per capita incomes rose by more than one-fourth, employment increased to a considerable extent, and food and other expenditures by the poor surpassed the levels reached in 1973.[39]

Conclusion

The findings of this analysis demonstrate that outward-oriented countries succeeded in rapidly expanding their exports and reaching higher growth rates than inward-oriented countries—in both a period of rapid world economic growth (1960–73) and a period of external shock (1973–85). As a result, outward oriented countries have captured an increased share of the world market from the inward-oriented countries. These conclusions are supported by a statistical analysis of exports and economic growth.

The favorable effects of exports on economic growth are due to the gains resulting from improved resource allocation, as indicated by the theory of comparative advantage, the exploitation of economies of scale and increased capacity utilization, improvements in technology, and increases in domestic savings and foreign direct investment under an outward-oriented development strategy. Such a strategy also brings larger gains in employment, wages, and income distribution than a strategy of inward orientation.

Notes

1. 1963 has been chosen as the initial year because the United Nations statistics do not provide trade data in the necessary commodity and geographical breakdown for earlier years. On data sources, the classification scheme utilized, and the method used in expressing data in 1975 prices see the notes to Table 1.

2. The estimates are 2.1 and 5.9 percent for foods and beverages, 2.9 and 2.8 percent for industrial materials, and 3.5 and 3.9 percent for nonferrous metals for the 1963–73 and the 1973–84 periods, respectively. They have been calculated by regressing exports on time.

3. The statistical formulation assumes that the causation goes from economic growth in the developed countries to their imports from the developing countries. In view of the small share of trade with the developing countries in developed country GDP (2 percent in 1984), we may neglect the possibility of a reverse causation.

4. In the former case fixed input coefficients in the short run, in the latter case the intercorrelation between the prices of developed and developing country manufactured exports may account for the observed results.

5. Both regression coefficients are statistically significant at the 1 percent level; the adjusted R^2 is 0.95.

6. Data for most recent years are not available for several developing countries included in these groups.

7. B. Balassa, 'The Newly-Industrializing Developing Countries after the Oil Crisis,' *Weltwirtschaftliches Archiv*, CXVII (1981) pp. 142-94, and Essay 2 in Bela Balassa, *The Newly Industrializing Countries in the World Economy* (New York: Pergamon Press, 1981) pp. 29-81.

8. This is the lower limit for upper middle-income countries in World Bank, *World Development Report 1986* (Washington, D.C., 1986) Table 1.

9. Alternative definitions of the newly-exporting countries are provided in O. Havrylyshyn and I. Alikhani, 'Is There Cause for Export Optimism? An Inquiry into the Existence of a Second Generation of Successful Exporters,' *Weltwirtschaftliches Archiv*, CXVIII (1982) pp. 651-63, and G. H. Hughes and D. M. G. Newbery, 'Protection and Developing Countries' Exports of Manufactures,' *Economic Policy*, I (1986) pp. 409-41. The former include countries with manufactured export growth rates in excess of average growth rates by the NICs during the 1970s; the latter include countries with populations in excess of 10 million and per capita incomes of at least $750 in 1983. Both of these definitions have the disadvantage of excluding India, whose manufactured exports exceed that of any newly-exporting country under the two definitions, and Pakistan which also surpassed the majority of the NECs.

10. For definitions, see section on Trade Orientation and Economic Growth.

11. This section draws on B. Balassa and Associates, *Development Strategies in Semi-Industrial Countries* (Baltimore, Md.: The Johns Hopkins University Press, 1982).

12. As in Table 3, the data refer to 1963, 1973, and 1980.

13. This section utilizes in part the results reported in B. Balassa, 'Policy Responses to Exogenous Shocks in Developing Countries,' *American Economic Review, Papers and Proceedings LXXVI* (1986) pp. 75-78.

14. Quantitative import restrictions were abolished and tariffs reduced to 10 percent over a five-year period, the only exception being the automobile industry. These measures were part of a package of economic reforms that included a large 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 interest rates, and the liberalization of financial markets.

15. B. Balassa, 'Policy Experiments in Chile, 1973–83' in G. M. Walton (ed), *The National Economic Policies of Chile* (Greenwich, Conn.: JAI Press, 1985) pp. 203-38, and Essay 8 in B. Balassa, *Change and Challenge in the World Economy* (London: Macmillan, 1985) pp. 157-84.

16. The policy changes comprised stabilization measures, with the twin objectives of reducing the rate of inflation and improving the balance of payments, as well as reform

measures, with a view to turning the Turkish economy in an outward direction and giving an increased role to market forces. Stabilization objectives were pursued by lowering the rate of money creation and reducing the public sector deficit. Both stabilization and reform objectives were served by a large devaluation. Furthermore, the bias against exports was substantially reduced through export subsidization and import liberalization. Finally, industrial prices and interest rates were freed.

17. Between 1980 and 1985, the dollar value of exports increased threefold. Increases were the largest for exports to the Middle East, but Turkey also gained export market shares in the OECD countries. Thus, the dollar value of Turkish exports to these countries more than doubled between 1980 and 1985, although total OECD imports hardly changed during this period.

18. In the investigation, use has been made of data for the 1960–66 and 1966–73 periods for the countries in question, with the addition of Israel and Yugoslavia; however, the calculations omit Uruguay. Balassa and Associates, *Development Strategies in Semi-Industrial Countries*, Ch. 3.

19. The latter procedure also avoids the statistical problem of intercorrelation due to the inclusion of exports in production.

20. A.O. Krueger, *Foreign Trade Regimes & Economic Development: Liberalization Attempts and Consequences* (Cambridge, Mass.: Ballinger, 1978) p. 282.

21. Brazil, Chile, Colombia, Egypt, Ghana, India, Israel, Korea, Philippines, and Turkey.

22. G. Feder, "On Exports and Economic Growth," *Journal of Development Economics* XII (1983) pp. 59–73.

23. C. Michalopoulos and K. Jay, "Growth of Exports and Income in the Developing World: A Neoclassical View," *Discussion Paper No. 28* (Washington, D.C.: Agency for International Development, 1973).

24. B. Balassa and Associates, *Development Strategies in Semi-Industrial Countries*, Ch. 7.

25. B. Balassa, "Exports, Policy Choices, and Economic Growth in Developing Countries after the 1973 Oil Shock," *Journal of Development Economics* XVIII (1985) pp. 23–35.

26. External shocks refer to the effects of the slowdown in the growth of world exports and changes in the terms of trade. Among policy responses to these shocks, export promotion is represented by changes in export market shares, import substitution refers to decreases in the income elasticity of import demand, and additional net external financing has been derived by extrapolating past trends in such financing.

27. B. Balassa and Associates, *The Structure of Protection in Developing Countries* (Baltimore, Md.: The Johns Hopkins Press, 1971) p. 82.

28. A. O. Krueger, "Some Economic Costs of Exchange Control: The Turkish Case," *Journal of Political Economy* LXXIV (1966) pp. 466–80.

29. J. de Melo, "Estimating the Cost of Protection: A General Equilibrium Approach," *Quarterly Journal of Economics* XCII (1978) p. 217. The results are 11.0 percent and 15.8 percent, respectively, postulating an optimal export tax for coffee, which is subject to an international agreement.

30. W. Grais, J. de Melo, and S. Urata, "A General Equilibrium Estimation of the Effects of Reductions in Tariffs and Quantitative Restrictions in Turkey in 1978," in T. N. Srinivasan and J. Whalley (eds), *General Equilibrium Trade Policy Modelling* (Cambridge, Mass.: MIT Press, 1986) p. 47.

31. M. A. Keyser, "Short-Run Impact of Trade Liberalization Measures in the Economy of Bangladesh: Exercises in Comparative Statics for the Year 1977," in Srinivasan and Whalley (eds), *General Equilibrium Trade Policy Modelling*, p. 273.

32. R. G. Harris with D. Cox, *Trade, Industrial Policy, and Canadian Manufacturing* (Toronto: Economic Council, 1983).

33. M. Nishimizu and S. Robinson, "Trade Policies and Productivity Change in Semi-Industrialized Countries," *Journal of Development Economics* XVI (1984), Table 5.

34. A. O. Krueger and B. Tuncer, "An Empirical Test of the Infant Industry Argument," *American Economic Review* LXXII (1982) pp. 1142–52.

35. I. J. Ahluwalia, *Industrial Growth in India* (Delhi: Oxford University Press, 1985).

36. H. B. Chenery, "Structural Change" in H. B. Chenery, S. Robinson and M. Syrquin

eds., *Industrialization and Growth: A Comparative Study*, (Oxford: Oxford University Press, 1986) Table 2.

37. Hong Kong, Korea, Taiwan, China and, in earlier periods, Israel and Spain. An exception is provided, however, by Singapore.

38. Argentina, Chile (prior to 1974), India, and Venezuela.

39. J. Mercenier and J. Waelbroeck, "Effects of a 50% Tariff Cut in the Varuna Model," in Srinivasan and Whalley (eds), *General Equilibrium Trade Policy Modeling*, pp. 301-03.

40. These estimates do not include the gains obtainable through the elimination of quantitative restrictions.

41. T. E. Weisskopf, "The Impact of Foreign Capital Inflow on Domestic Savings in Underdeveloped Countries," *Journal of International Economics* II (1972) pp. 25-38.

42. G. Papanek, "Aid, Foreign Private Investment, Savings, and Growth in Less Developed Countries," *Journal of Political Economy* LXXXI (1973) pp. 120-30.

43. A. Maizels, *Exports and Economic Growth in Developing Countries* (Cambridge, England: Cambridge University Press, 1968) Ch. 4.

44. J. N. Bhagwati and T. N. Srinivasan, *Foreign Trade Regimes and Economic Development: India* (New York: Columbia University Press, 1975).

45. At the same time, one may agree with Bhagwati that "while there is much empirical evidence in support of a statistical association between exports and saving, there is little evidence so far for some of the hypotheses that could provide a rationale for such an association implying a causal relationship running from exports to savings." J. N. Bhagwati, *Foreign Trade Regimes and Economic Development: Anatomy and Consequences of Exchange Control Regimes* (Cambridge, Mass.: Ballinger, 1978), p. 147.

46. E. Grinols and J. N. Bhagwati, "Foreign Capital, Savings and Dependence," *Review of Economics and Statistics* LVIII (1976) pp. 416-24.

47. Bhagwati, p. 211. Bhagwati's definition of an export promoting strategy (p. 207) is practically equivalent to the above definition of outward orientation.

48. R. Banerji and F. Riedel, "Industrial Employment Expansion under Alternative Trade Strategies: Case of India and Taiwan, 1960-1970," *Journal of Development Economics* VII (1980) pp. 56-7[illegible].

49. A. O. Krueger, *Trade and Employment in Developing Countries, 3 Synthesis and Conclusions*, (Chicago: University of Chicago Press, 1983) Table 6.2.

50. An apparent exception is Chile but this was due to the capital intensity of its intra-Latin American exports under the policies applied; the labor intensity of exports in trade with developed countries much exceeded that for import substitution.

51. G. S. Fields, "Employment, Income Distribution, and Economic Growth in Small Open Economies," *Economic Journal* XCIV (1984) pp. 74-83.

52. J. F. Carvalho and C. F. S. Haddad, "Foreign Trade Strategies and Employment in Brazil," in A. O. Krueger, M. B. Lary, T. Monson, and N. Akrasanee (eds), *Trade and Employment in Developing Countries 1: Individual Studies* (Chicago: University of Chicago Press, 1981) Table 2.15.

53. Krueger, *Trade and Employment in Developing Countries, 3 Synthesis and Conclusions*, Table 2.1.

54. J. R. Behrman, "Country and Sectoral Variations in Manufacturing Elasticities of Substitution between Capital and Labor," in A. O. Krueger, (ed), *Trade and Employment in Developing Countries 2: Factor Supply and Substitution* (Chicago: University of Chicago Press, 1982) p. 186.

55. Fields further made comparisons with three small developing countries (Barbados, Jamaica, and Trinidad and Tobago) to be considered as open economies although, given their high level of protection, they may better be classified as inward oriented. And, while he attributed the high level of unemployment in these countries to the application of a "lement" wage policy, compared to the "strict" wage policies allegedly followed by the Far Eastern countries, this assertion conflicts with the fact that real wages rose more rapidly in the Far East than in the Caribbean countries, with an absolute decline observed in Jamaica.

56. B. Balassa, G. Bueno, P. P. Kuczynski, and M. H. Simonsen, *Toward Renewed Economic Growth in Latin America* (Mexico, D.F.: El Colegio de Mexico, Rio de Janeiro:

Fundacão Getulio Vargas, Washington, D. C.: Institute for International Economics, 1986) Table 1.6. — Data for India are not available.

57. Balassa and Associates, *Development Strategies in Semi-Industrial Countries*, p. 58.

58. H. Myint, 'Growth Policies and Income Distribution,' Discussion Paper, Development Policy Issues Series, Report No. VPERS1 (Washington, D. C.: World Bank, 1985).

59. S. S. Bhalla, and P. Glewwe, 'Growth and Equity in Developing Countries: A Reinterpretation of the Sri Lankan Experience,' *World Bank Economic Review* 1 (1986) p. 61.

THE INTERACTION OF FACTOR AND PRODUCT MARKET DISTORTIONS IN DEVELOPING COUNTRIES

The principal forms of product market distortions include trade policies that protect imports and subsidize exports, exchange rate policies, and price controls—all of which affect relative product prices. In turn, factor market distortions may result from social policies, financial policies, and tax policies—all of which affect the relative prices of capital and labor.

But distortions in product markets will also have an impact on factor markets and vice versa. Product market distortions will give rise to distortions in factor markets through their effects on factor prices, while factor market distortions will cause distortions in product markets through their effects on the cost of production.

Experience suggests that interventions in product and in factor markets are interrelated, and this fact has a bearing on the choice of development strategies. Thus, governments will be less inclined to intervene in factor markets if product markets are relatively undistorted, as is the case under an outward-oriented development strategy, lest export prospects be jeopardized. In turn, there will be less resistance to measures that distort factor prices if protection insulates the domestic economy from foreign influences under an inward-oriented development strategy.

At the same time, the existence of policy-imposed factor market distortions will affect the choice of the policies applied in regard to product markets. Distortions in factor markets will tend to discourage adoption of an outward-oriented development strategy, whose success depends on the operation of these markets. In particular, the impact of trade liberalization on exports will depend on the ability of capital markets to provide funds for export-oriented investments.

The experiences of Latin American and Far Eastern countries provide support for these propositions. While in Latin America inward orientation has been accompanied by considerable distortions in labor and capital markets, in the Far East outward orientation has been associated with free labor markets and the increased freedom of capital markets.[1]

In the mid-1960s, reforms of trade and exchange rate policies in the Far Eastern countries were carried out simultaneously with

reforms of capital markets. Also, in the early 1980s, Turkey linked trade and exchange rate reforms with reforms of labor and capital markets. Finally, an IMF study has concluded that "interest rate repression often coexists with highly protectionist trade policies and overvaluation of the domestic currency" in developing countries.

Effects of Product Market Distortions on Factor Markets

Developing countries tend to protect capital intensive industries. The resulting distortions in product markets engender a flow of resources from labor-intensive to capital-intensive industries, thereby favoring capital at the expense of labor.

Ceteris paribus, the protection of capital intensive industries will raise the price of capital relative to the price of labor. But protection will also reduce demand for imports and cause the exchange rate to appreciate (a unit of domestic currency will buy more foreign exchange). This, together with relatively low tariffs on capital goods, and the use of tariff exemptions on these products, will mean lower prices for imported capital goods in terms of local currency.

Take the case, for example, when the exchange rate is 100 pesos to the dollar under free trade, and an average tariff of 50 percent necessitates a 20 percent appreciation of the currency in order to ensure balance-of-payments equilibrium. Now, under an exchange rate of 80 pesos to the dollar, tariff exemptions on capital goods will mean that capital goods cost 20 percent less under protection than under free trade. And the net effect will be a decline in capital goods prices, as long as tariffs on these products are less than 25 percent.

National Bureau of Economic Research (NBER) studies carried out under the direction of Anne Krueger indicate the combined effects of the overvaluation of the exchange rate, low import tariffs on capital goods, and tariff exemptions on these goods. The measures applied are shown to have led to reductions in capital costs ranging between 30 and 40 percent in Chile, Pakistan, and Tunisia during the period between the early 1960s and the early 1970s. Similar results have been obtained in regard to imported capital goods in Argentina. But in Argentina the protection of the domestic capital-goods sector reduced the average cost differential for capital goods to 8 percent. (See Table 5, Column 2.) At the same time, import licensing favored

Table 5 **Percentage Distortions in Labor and Capital Costs from Various Sources**

Country	Period	Percentage Increase in Labor Costs	Percentage Reduction in Capital Costs Owing to Factor Market Distortions					Percentage Increase in Wage-Rental Ratio, due to	
			Trade Regime	Credit Allocation	Tax Preferences	Together	Total	Factor Market Distortions	Factor and Product Market Distortions
Argentina	1973	15	8	9	NA	9	17	26	38
Brazil	1968	27	0	4	NA	4	431	31	
Chile	1966-68	NA	37	NA	NA	NA	NA	NA	NA
Hong Kong	1973	0	0	0	0	0	0	0	
Ivory Coast	1971	23	0	3	12	15	15	45	45
Pakistan	1961-64	0	38	53	10	58	76	238	316
Korea	1969	0	0	8	2	10	10	11	11
Tunisia	1972	20	30	6	NA	6	36	28	87

Source: A. O. Krueger, *Trade and Employment in Developing Countries: Synthesis and Conclusion* (Chicago: University of Chicago Press, 1983), Table 7.1.

capital-intensive, import-substituting industries over relatively labor-intensive, small- and medium-size industries in Argentina and Pakistan, whereas the importation of capital goods was fairly freely permitted in Chile and in Tunisia.[3]

Distortions in the prices of capital goods were associated with the application of an inward-oriented development strategy in the countries under consideration. In contrast, the effects of trade policies on the cost of capital goods were approximately nil in outward-oriented countries, such as Hong Kong and Korea. This was also the case in the Ivory Coast and, after the policy reforms of the mid-1960s, in Brazil (Table 5).

Reductions in the cost of capital under an inward-oriented development strategy discourage the use of labor. And while the protection of capital-intensive industries tends to raise the price of capital, it also reduces employment through the shift of resources from labor-intensive to capital-intensive industries. These effects are aggravated in cases where relatively capital-intensive industries are favored within both the import-substituting and the export sectors.

Column (4) of Table 6 shows the employment effects of differences in rates of import protection and of export subsidies among import substituting and among export industries for nine developing

countries. In the calculation, the average labor coefficient in import-substituting industries has been taken as the benchmark for each country. The estimates pertain to the late 1960s and the early 1970s.[4]

The results reported in Table 6 show further differences in average labor coefficients between import-competing and export industries. It is apparent that, with two exceptions, the labor intensity of exports much exceeds that of import substitution, indicating that import-competing industries are, on the whole, more capital-intensive than export industries. The exceptions are Korea, which provided similar incentives to exports and import substitution under an outward-oriented development strategy, and Chile, where the incentives applied in the 1960s distorted trade patterns to the extent that exports became more labor intensive than import substitutes.[5]

The estimates assume that labor and capital would be reallocated among industries in response to a move towards free trade. For such a reallocation to occur, the freedom of factor markets would need to be assured. Calculations by T. Paul Schultz, indicating the joint effects of product market and factor market distortions on the distribution of incomes in Colombia, provide some relevant information. Schultz concludes that "the close relationship found here between levels of effective protection and unexplained variation in labor incomes provides a prima facie case that development and trade policies have played a role in generating or at least maintaining intersectorial differences in factor incomes that look like quasi rent."[6] He adds that "protection may have increased the returns to both labor and capital in the more protected sectors, but the proportionate gains for employers exceed those received by employees..."[7] At the same time, the resulting quasi-rents have stimulated rent-seeking activity that involves a cost to the national economy.[8]

Employment will further be affected as economic growth tends to be more rapid under an outward-oriented than under an inward-oriented development strategy.[9] However, employment will be reduced to the extent that labor productivity is rising more rapidly under the first alternative than under the second. These effects, then, will modify the impact on employment of the sectorial composition of output.

Banerji and Riedel analyzed the effects of the above factors on industrial employment in India and in Taiwan, which can be taken to be representative of inward- and outward-oriented development

strategies, respectively. The results indicate that the favorable effects on employment of a shift towards labor-intensive export industries in Taiwan were reinforced by rapid output growth while a shift occurred towards capital-intensive industries in India where output also grew at a slower rate. With higher productivity growth in Taiwan than in India, industrial employment rose at an average annual rate of 8 percent during the 1954–71 period in the first case and at 2 percent a year during the 1950–69 period in the second.[10]

Table 6 Sources of Potential Increase in Labor Coefficients

			Increase (Percentage) with			
Country	Period	Observed Direct Labor Coefficient (1)	No Domestic Factor Market Intervention (2)	No Trade Strategy Distortion (3)	No Within-Strategy Inefficiency (4)	Potential Coefficient (5)
			Import-Competing Industries			
Argentina	1973	100	16	-6	0	110
Brazil	1970	100	15	NA	NA	115
Chile	1966-68	100	NA	7	NA	107
Colombia	1970	100	NA	NA	10	110
Indonesia	1971	100	NA	NA	66	166
Ivory Coast	1972	100	25	0	12	140
Pakistan	1969-70	100	271	0	NA	371
Korea	1968	100	8	0	0	108
Tunisia	1972	100	17	38	51	243
			Exportable Industries			
Argentina	1973	130	25	-6	0	149
Brazil	1970	207	15	NA	NA	238
Chile	1966-68	80	NA	7	68	144
Colombia	1970	170	NA	NA	24	210
Indonesia	1971	209	NA	NA	0	209
Ivory Coast	1972	135	25	0	0	169
Pakistan	1969-70	142	271	0	NA	384
Korea	1968	100	8	0	0	108
Tunisia	1972	128	17	38	0	198

Notes: The table shows potential increases in direct labor coefficients in the event of the elimination of (a) factor market distortions; (b) the factor price effects of protection; and (c) product market distortions within import-substitution and export industries.

Source: A.O. Krueger, *Trade and Employment in Developing Countries: Synthesis and Conclusion* (Chicago: University of Chicago Press, 1983), Table 1.

Labor Market Distortions

A variety of policy-induced distortions are observed in the labor markets of the developing countries. They include regulations aimed at ensuring job security, social security schemes, minimum wage legislation, taxation of labor income, and wage and employment policies in the public sector.

Regulations concerning job security. Developing countries have often applied measures aimed at ensuring job security. In Argentina, for example, labor laws bestow job security on employees after only one year and severance payments increase with the length of employment. The situation is similar in Venezuela.[11] In Panama, labor legislation is estimated to have raised labor costs by 30 percent, in addition to the cost of social security charges and fringe benefits, to a total of 59 percent of basic wages.[12]

Apart from reducing mobility, labor regulations aimed at limiting reductions in employment tend to have the opposite of the desired effect by increasing the cost of labor. As noted by David Laidler,
—they discourage workers from quitting voluntarily to search for other employment;
—they make it expensive for an otherwise viable firm to close down a particularly loss-making operation;
—moreover, they inhibit employers from taking on new workers because of the prospective cost of declaring them redundant at some time in the future. Such schemes inhibit resource mobility, slow down the pace of economic change, and increase unemployment. They do not serve simply to redistribute wealth, but to reduce the total amount of wealth available for redistribution.[13]

Social security schemes. According to data collected by the U.S. Department of Health and Human Services, Social Security Administration, social charges exceed 20 percent of wages in India and range between 15 and 45 percent in most Latin American countries.[14] It has further been reported that employer and employee contributions, taken together, were in the 55–65 percent range for blue- and white-collar workers in industry and commerce in 1969 in Uruguay, and the ratio reached 46 percent for blue-collar workers and 65 percent for white-collar workers in 1968 in Chile. But, Chile subsequently privatized its social security system.[15]

The effects of social security schemes on the cost of labor and on employment will depend on the elasticity of supply of labor. If the labor supply was infinitely elastic in terms of the real wages, social charges would increase the cost of labor by their full amount, irrespective of whether they are paid by employers or by employees, with adverse effects on employment.

While such an extreme case is unlikely to be found in reality, in the domestic economy the supply of unskilled labor may be assumed to be more elastic than that of skilled, technical, and managerial labor, so that social security schemes will affect the cost and the employment of the former to a greater extent than of the latter. Also, the elasticity of the supply of unskilled labor is said to be higher in South Asia than in other developing areas.[16]

At the same time, according to Carmelo Mesa-Lago, "accumulated evidence in Latin America...indicates that social security systems financed by contributions upon wages have a negative effect on employment."[17] Furthermore, it has been estimated that, under realistic assumptions made about the elasticity of labor supply, average social security charges of 27 percent have reduced employment in Brazilian manufacturing by about 8 percent.[18]

These effects on labor costs of social security charges create a wedge between the demand price and the supply price of labor. In South Asia, the compulsory provision of various services, including housing, education and training, have similar effects.[19]

Minimum wage legislation.[20] Labor costs may also be raised by the statutory determination of minimum wages. In this connection, one needs to consider the extent to which raising minimum wages leads to increases in the entire wage structure as well as the effects of the resulting wage increases on employment.

The classic study of the effects of minimum wage legislation on wages and employment is *Wages, Productivity, and Industrialization in Puerto Rico* by Lloyd Reynolds and Peter Gregory. They note that "the closeness of actual hourly earnings in most industries to the legal minimum, the parallelism in the timing of upward movements, and the tendency for the minimum to encroach gradually on the actual earnings level all suggest that it is minimum wage awards which have been forcing the pace of wage advance in Puerto Rico since 1950."[21] On the basis of an econometric estimate, the authors conclude that "a change in the wage could be expected to be associated with an

approximately equal proportionate change in employment in the reverse direction, with the wage bill remaining roughly constant."[22]

It has been suggested that Puerto Rico is a special case because of its close association with the United States and its superior administrative machinery,[23] as well as because of its relatively high per capita income, its small labor force, and the high share of the labor force engaged in nonagricultural occupations in the mid-1950s.[24] But it is doubtful whether Puerto Rico's association with the United States and the superior skills of its administration are relevant to the issue in question. Moreover, there were a number of developing countries with urban incomes which exceeded incomes in Puerto Rico in the early 1950s, when minimum wage legislation was introduced there, and more countries have since surpassed this level.

According to an ILO report, "the evidence...suggests that conditions in which increases in minimum wages exert a substantial influence on wages actually paid are widely encountered. This influence is particularly strong where minimum rates are the going rates for large numbers of workers, which seems to be the case in most African and in many other (but not all) developing countries."[25] And, while the evidence provided on this point in a subsequent ILO report is inconclusive,[26] it should be recognized that minimum wage legislation may have adverse economic effects even if it does not lead to proportionate increases in the wage structure.

The narrowing of wage differences will discourage socially profitable investments in human capital by reducing the incentives for such investment. Also, distortions will be introduced in the choice between labor and physical capital, between unskilled labor and skilled labor, as well as between labor in the formal sector and the informal sector, where minimum wage regulations are rarely applied.

There is evidence on the effects of minimum wage legislation in several countries. In Argentina, minimum wage legislation is reported to have increased unskilled wages by 25 percent.[27] In the Ivory Coast, a 20 percent increase in the wages of unskilled labor through minimum wage legislation is said to have occurred.[28] While comparable estimates for developing countries are not available, in Canada the rate of unemployment is shown to have increased in the same proportion as the minimum wage.[29]

This is not to say that minimum wage legislation would have had a pervasive influence in the developing countries. In some countries,

such as Brazil, its effects have been largely eroded by inflation.[30] At the same time, minimum wages are particularly high in socialist-oriented developing countries.[31] *The Economist* reports in regard to Tanzania that "in the towns minimum wages in some industries were set three times as high as India's, whose labor productivity was three times higher."[32]

According to the recent ILO report, "the problem [of setting minimum wages] is essentially viewed as one of striking a balance between the social gains to be made, in the form of improvement in the relative wage position of the lowest paid, and any costs these might entail in the form of reduced employment, slower growth and increased inflation."[33] At the same time, with minimum wage legislation generally benefiting a privileged urban labor group, the social gains themselves may be open to question.[34]

As expressed by one observer, "this is directly contrary to the initial objective of minimum wage legislation, i.e., the protection of unorganized workers whose wages are exceptionally low."[35] Yet, as noted in an ILO report, "for Latin America it has been estimated that 80 percent of the urban workers receiving incomes below the legal minimum wage belong to the informal sector" and "the enforcement of minimum wages in developing countries encounters its most serious obstacles in traditional agriculture outside the larger plantations and modernized farms."[36] Minimum wages are also said to have contributed to the sizable differences between formal and informal sector wages in Africa and the Middle East.[37]

Taxation of labor incomes. Tax rates on labor incomes tend to be high in developing countries with rapid inflation. Apart from Brazil where tax rates were indexed prior to the February 1986 monetary reform, income recipients are shifted to higher tax brackets as inflation proceeds. While this can be undone through periodical revisions of the tax schedule, such revisions tend to be delayed.

In Turkey, for example, minimum wage income became subject to a tax of 28 percent in 1980 as a result of inflation during the 1970s. Under the new tax schedule introduced on January 1, 1981, the minimum wage is not subject to tax but the marginal tax rate is 40 percent on incomes immediately above this level.[38]

Tax progressivity means that income tax rates are higher for skilled, technical, and managerial labor than for unskilled labor. In Morocco, for example, the marginal tax rate, including the National

Security Contribution and the supplementary tax, rose from 13 percent at an annual income of 6,000 dirhams to 50 percent at 100,000 dirhams, and to 75 percent at 750,000 dirhams in 1982, when the exchange rate was 6 dirhams to the U.S. dollar.[39] In turn, the top marginal tax rates were 65 percent in Thailand, 55 percent in Korea, 49 percent in Colombia, and 42 percent in Mexico in the early 1980s.[40]

High marginal tax rates and the progressivity of the tax system create distortions in labor markets by providing incentives to reduce the work effort and to shift from payment in money to payment in kind. Also, schooling and training, as well as the movement of labor from lower to higher productivity sectors, are discouraged as differences in after-tax incomes are reduced.

At the same time, the elasticity of supply of such labor will be increased through international migration. And, in Morocco, tax-induced increases in the cost of foreign technicians and managers are said to be a factor discouraging the subsidiaries of foreign enterprises from establishing in the country.[41] This is because the firms in question have to assure particular levels of real income for their technicians and managers, and the high income taxes raise their salary costs.

Wage and employment policies in the public sector.[42] Governments may also affect the wage structure through public sector employment and wage policies. Heller and Tait have found that in thirty-eight developing countries, on the average, public jobs account for 44 percent of nonagricultural employment. This ratio is inversely correlated with per capita incomes. In the sample countries, regional averages are 59 percent in Africa, 36 percent in Asia, 27 percent in Latin America, compared with 24 percent in the developed countries. Also, the ratio tends to be higher in the countries that, at one time or another, adopted a socialist orientation; it is 87 percent in Benin, 81 percent in Zambia, 78 percent in Tanzania, 72 percent in India, and 74 percent in Ghana.[43]

As the authors suggest, "the clear message from these statistics is the significant impact that government policy on wages and salaries is likely to have on the overall remuneration of employees in the nonagricultural sector in developing countries."[44] At the same time, the ratio of the average central government wage to GDP per capita tends to be inversely correlated with per capita incomes; it is 6.05 in Africa, 2.90 in Asia, 2.94 in Latin America, and 1.74 in the developed countries.[45]

According to the same authors, "this situation is not necessarily surprising, as, in poorer countries, the educational requirements of public sector employment are often much higher than that of private sector employment."[36] But differences in educational requirements provide only a partial explanation for such public-private wage differentials. Thus, in 1971, average wages were 16 percent higher in the government and 23 percent higher in parastatals than in the private sector in Tanzania, if adjustment is made for differences in occupational composition. Moreover, the scope of fringe benefits was considerably greater in the government and in parastatals than in the private sector.[37]

Wages in the public sector exceed wages in the private sector at lower, although not at higher, levels of education in Brazil, Colombia, Greece, Malaysia, and Portugal.[38] In contributing to higher wages for the less educated worker, public sector wage policies tend to compress the wage distribution, thereby aggravating distortions in labor markets. Also, in some African developing countries (e.g., Mali and Tanzania) the government or the parastatals are residual employers for high school and/or university graduates, thereby introducing distortions as between private and social returns to education.

It has further been reported that in Pakistan increases in public sector wages spilled over to the private sector. Taking account of the effects of minimum wage legislation, the wage policies applied in the 1970s were said to be responsible for the major part of the increase in real wages during this period.[39]

All in all, regulations aimed at ensuring job security, social security schemes, minimum wage legislation, taxation of labor incomes, and wage and employment policies in the public sector tend to raise wages in developing countries, thereby contributing to losses in efficiency and in employment. Also, the progressive taxation of wages and public policies tend to reduce differences in remuneration between highly skilled and unskilled occupations in the formal sector. Finally, distortions are created through differences in labor costs between the formal and the informal sectors, owing to the fact that labor legislation is rarely applied, or is evaded, in the informal sector.

Estimates on the effects of social security schemes and minimum wage legislation in the formal sector have been made in the NBER studies referred to above. The estimates show the resulting increases in labor costs to have been 27 percent in Brazil, 23 percent in the

Ivory Coast, 20 percent in Tunisia, and 15 percent in Argentina in the late 1960s and early 1970s (Table 5).

Capital Market Distortions

Policy-imposed distortions of capital markets may originate in financial policies or in tax policies. In all instances, the measures applied affect the rate of return on alternative investments in physical and financial assets, including money.

Financial policies. High and unstable rates of inflation discriminate against the holding of financial assets unless they are fully indexed. In the absence of indexing, nominal interest rates on financial obligations would need to be raised in order to compensate for inflation. With variations in the rate of inflation, however, real rates of interest corresponding to a particular nominal rate vary and will be subject to uncertainty.

Also, the lack of indexing of demand deposits in the face of inflation represents a tax on non-interest-bearing money holdings. This implicit tax, and the uncertainty relating to the real rate of interest on financial assets, tend to induce people to reduce their holdings of such assets. Reductions in the demand for financial assets, in turn, weaken the capacity of the banking system to fulfill its function of channeling funds to efficient production and investment.

Variations in real interest rates may occur even when financial assets are indexed. Thus, while Brazil applied indexing, real interest rates varied to a considerable extent as a result of changes in macroeconomic policies. Following negative real interest rates in earlier years, these rates turned slightly positive in the mid-1960s. Real interest rates again became negative in 1980 while a year later contractionary macroeconomic policies led to very high real rates. In 1985, Treasury bills were yielding 15 percent and certificates of deposit 20 percent in real terms, with bank lending rates exceeding 30 percent. Little change occurred in these rates following the monetary reform undertaken in February 1986.

The policies applied after 1979 led to high real interest rates in the countries of the Southern Cone. Real interest rates increased further as a result of the stabilization efforts undertaken by these countries in response to the debt crisis. In Argentina, lending rates were set at 6

percent a month following the application of the Austral Plan, when the rate of inflation was about 4 percent a month. Real interest rates are also high in Mexico, with monthly lending rates of 7 percent and prices rising 5 percent a month.[50]

Excessively high real interest rates have adverse effects on existing firms and may discourage investments that are socially profitable. They also engender demands for preferential treatment on the part of would-be borrowers. Interest preferences, in turn, introduce distortions in the allocation of savings among alternative investments.

While real interest rates have been high in recent years in several developing countries, traditionally they have been low and even negative.[51] The following discussion concentrates on the effects of this policy on savings, international capital flows, financial intermediation, and the allocation of savings among alternative investments.

The effect of interest rates on savings has been subject to much controversy. Ceteris paribus, low interest rates will favor present consumption over future consumption (savings). However, to the extent that people have definite savings objectives, for retirement or bequest, low interest rates may give rise to higher savings.

Estimates for Asian countries by Fry[52] showed a positive correlation between real interest rates and domestic savings in a cross-country time-series framework. But, for the same countries, Giovannini[53] found that the real interest rate loses its statistical significance if the years 1967 and 1968 for Korea are excluded from the equation and if data for longer time periods and multi-year averages are used for the individual countries. Also, estimates of the intertemporal substitutability of consumption indicated that the expected path of consumption responded to changes in the real rate of interest in 5 out of 18 countries while the results were inconclusive for the rest.

In interpreting these estimates, one should note the possibilities of error involved in measuring consumption and savings in developing countries and in choosing the appropriate rate of interest for the calculations.[54] In the savings equations, an additional problem is the inclusion of income growth among the independent variables. The impact of real interest rates on savings will be underestimated if real interest rates positively affect the rate of economic growth.

The existence of such a relationship has been shown in an IMF study, whose conclusion deserves full quotation:

> Repression of interest rates produces lower rates of saving, of investment, and, hence, of economic growth than would result from equilibrium interest rates, chiefly because domestic financial savings are discouraged in favor of either the accumulation of goods or of foreign assets. The experience of a number of countries confirms the dependence of domestic financial saving on interest rates. Subequilibrium interest rates also encourage businesses to undertake investments with low rates of social return, such as the accumulation of inventories, rather than using their resources to build new plants and equipment. Various selective credit arrangements that accompany subequilibrium interest rates are not likely to improve the overall quality and productivity of investment.[55]

In fact, the econometric results obtained in intercountry relationships show that high real interest rates significantly increase the rate of growth of financial assets (the broadly defined money supply) as well as that of GDP. The relationships are confirmed if the part of the rate of growth of GDP (financial assets) uncorrelated with interest rate policy is introduced in the estimating equation.[56]

The results support McKinnon[57] and Shaw[58] who have emphasized the adverse effects of below-equilibrium, in particular negative, real interest rates on the development of financial markets. But, the growth of formal financial intermediaries might take place at the expense of unorganized money markets. If reserve requirements were higher in formal than in informal markets, the availability of credit might be reduced rather than increased.[59]

The McKinnon and Shaw conclusions, however, will obtain if the shift into financial assets in the formal market comes from physical assets, such as consumer durables and gold. McKinnon and Shaw also suggest that total savings will rise in response to a financial reform that increases real interest rates. This conclusion is confirmed by the experience of the financial reforms of the 1970s in Uruguay.[60]

Also, informal credit markets may be less efficient than formal ones because of market segmentation, and may require substantial reserves, because of greater risks. Finally, below-equilibrium and, in particular, negative real interest rates in formal credit markets will adversely affect the allocation of savings among alternative investments.

In such a situation, self-investment at low, and even negative, real rates of return is encouraged, thus diverting funds from higher-

yielding investments in the national economy. At the same time, with low and negative real interest rates creating an excess demand for funds, there will be credit rationing that introduces arbitrariness in the decision-making process, irrespective of whether rationing is done by the banks or by the governments.

The IMF report cited earlier supports the conclusion that inward orientation tends to be accompanied by repressed interest rates. But import-substituting industries will receive priority in credit allocation both by the banks, because of the low risk involved in producing for the highly protected domestic market, and by the government, which tends to favor such activities.[61]

At the same time, since the interest rate does not equilibrate the demand for, and the supply of, investible funds, the claimants for—and the recipients of—credits will include firms whose investments are not profitable at market-clearing interest rates. Furthermore, lending at below-equilibrium interest rates will encourage the excessive use of capital in those investments which do receive financing.

Policy-imposed differences between lending and borrowing rates will introduce additional distortions by increasing the wedge between the demand price and the supply price of credit. In 1982, in Turkey, such differences were due to the existence of non-interest-bearing liquidity and reserve requirements, compulsory contributions to the Differential Interest Rate Rebate Fund, and the financial transactions tax on the revenue-earning operations of the banks. These items raised the interest rate to lenders to 76 percent, compared with an interest rate of 50 percent on six-month deposits.[62]

A further consideration is that interest rates for savings which are below-equilibrium will induce private capital exports in search of higher returns. From the available evidence, it appears that low domestic interest rates have contributed to capital flight, in particular in Mexico whose financial markets are the most closely linked with U.S. markets.[63]

Also, both above- and below-equilibrium interest rates to lenders can be expected to give rise to interventions in credit markets. When interest rates are above equilibrium, borrowers will clamor for preferential rates; when they are below, credit allocation will be necessary.

A review of the financial policies of ten developing countries in the 1970–82 period has shown the prevalence of interventions in financial markets among developing countries. Among the countries

under consideration, interest rate differentials between preferential and nonpreferential credits were especially high in Peru (69 percent) and in Turkey (37 percent) in 1982. The government control of financial resources extended to one-fifth of the total in Peru and to three-fifths in Turkey; this ratio was 60–70 percent in Bangladesh and nearly 100 percent in Nigeria.[64]

Tax policies.[65] As noted above, revisions of the income tax schedule tend to lag behind inflation, thereby shifting income recipients from lower to higher brackets. Delays in the revaluation of balance sheets may also increase tax liabilities for business enterprises as most developing countries do not use inflation accounting.

But, if investments are financed from borrowed funds, the loss in the real value of invested capital is compensated by the gain obtained through the decline in the real value of domestic debt. There is no compensation, however, if investments are financed from internally generated funds. Correspondingly, the taxable value of profits is overstated, and reliance on loan capital is encouraged at the expense of the use of retained earnings for investment.

Further problems arise in regard to interest income since the principal loses value as a result of inflation. In Colombia, for example, nominal interest receipts are taxed at a rate of 18 percent but the effective tax rate of real (inflation-adjusted) earnings was 67.5 percent in 1983.[66]

But even if full adjustment were made for inflation, or inflation were eliminated, various features of the tax system of developing countries will give rise to distortions. To begin with, taxing the amount saved as well as the return on savings introduces a bias in favor of present and against future consumption. Yet, this is the case in most developing countries where incomes from work as well as from capital (interest income and dividends) are taxed. Only Uruguay taxes consumption rather than income.

Moreover, many developing countries follow the U.S. practice of taxing corporate profits as well as dividends paid from these profits. At the same time, the double taxation of corporate profits discourages corporate savings, investment in shares, and hence the development of capital markets, while introducing a bias in favor of debt and against equity financing.

Taxing the earnings of capital also encourages capital flight. This conclusion applies, in particular, to the taxation of interest income,

where the choice is between domestic and foreign portfolio investments. But it also applies to taxation on capital gains.

The above considerations favor the use of consumption (indirect) taxes, which may take the form of cascade-type and value added taxes. Most developing countries and all developed countries apply the so-called destination principle, under which indirect taxes are rebated on exports and imposed on imports at the same rate as on domestic products.

The application of the destination principle, however, raises problems in countries using cascade-type indirect taxes. Such taxes are levied at every stage of fabrication and their cumulative effects are difficult to gauge. Also, the burden of taxes on consumption varies according to the number of stages, thereby encouraging the vertical integration of production and discouraging the consumption of commodities that go through a greater number of stages.

To escape these difficulties, a number of developing countries, including Colombia, Korea, and Mexico, have followed the European example in adopting value added taxation, which equalizes the tax burden on all consumer goods. Also, exports are exempted from the value added tax and receive rebates for taxes paid at earlier stages of fabrication. Nevertheless, in some countries, such as Mexico, the real value of the rebate is reduced by inflation because of the passage of time between collection and reimbursement.

Further questions relate to the use of investment incentives that are widely employed in developing countries. Among the four countries covered in a World Bank study, tax credits are provided in Colombia, Korea, and Mexico, tax discounts in Colombia, and tax certificates (for paying other taxes) in Mexico. Also, tax holidays are used in Thailand and special reduced tax rates in Colombia. All four countries permit accelerated depreciation on new investment.[67]

Investment incentives tend to offset the tax disincentives for savings referred to above. They may even overcompensate for these disincentives, thereby creating a bias in the incentive system in favor of savings. At the same time, such incentives favor corporate savings over private savings.

There is a prima facie case for investment incentives to exports that are discriminated against under import protection. A case may also be made for providing tax concessions for research and development whose effects will often spread from one firm to another.

Incentives favoring particular activities will, however, distort the system of incentives, unless there is evidence of external economies.

Investment incentives tend to favor large-scale over small- and medium-scale enterprises in most developing countries. In Pakistan, for example, small investors faced capital costs more than twice those of large-scale firms until 1972.[68]

Also, there are considerable differences in regard to the sectorial pattern of investment incentives among the four countries covered by the World Bank study referred to earlier. Following selective promotion in the 1970s, Korea has practically ceased discrimination among sectors in the early 1980s and it limits tax concessions to export activities and to research and development expenditures. Having earlier promoted the steel and automobile industries, Colombia has also moved towards neutrality across sectors while granting tax incentives to export activities. In turn, Thailand provides limited incentives to projects that are considered desirable from the national point of view but may not be financed without tax incentives. Finally, Mexico has a complicated system of investment incentives, under which the extent of incentives depends on the sector as well as on the location of the investment.[69]

At the same time, developing countries employ a variety of instruments to provide investment incentives. The use of these instruments may entail discrimination between capital-intensive and labor-intensive projects as well as between long-lived and short-lived projects.

Tax incentives that reduce the cost of capital will discriminate in favor of capital-intensive and against labor-intensive projects. This has been shown to be the case in several of the countries in the NBER studies. Thus, it has been estimated that the tax measures applied reduced the cost of capital, on the average, by 12 percent in the Ivory Coast, by 10 percent in Pakistan, and by 2 percent in Korea (Table 5, Column 4).

It has further been shown that initial tax allowances, tax credits on net investment, tax credits on gross investments which are set against depreciation, as well as interest subsidies distort incentives in favor of long-lived investment. Accelerated depreciation rates generally have similar effects. In turn, investment allowances and tax credits on gross investment over and above regular depreciation do not affect the choice between long-lived and short-lived investments.[70]

Effects of the Policies Applied

Combined effects of factor and product market distortions. Table 5 shows the effects of distortions in product, labor, and capital markets on the prices of labor and capital in the countries of the NBER study during the period spanning the early 1960s and the early 1970s. It is apparent that capital market distortions (credit allocation and tax preferences) were by far the largest in Pakistan, where the effect was to reduce the average cost of capital by 58 percent. It was followed by the Ivory Coast (15 percent), Korea (10 percent), Argentina (9 percent), Tunisia (6 percent), and Brazil (4 percent), with no distortions observed in Hong Kong.

The relative importance of distortions in labor and in capital markets also varies among countries, with the former being more important in Argentina, Brazil, the Ivory Coast, and Tunisia and the latter in Pakistan and Korea. However, Brazil shifts into the second group if account is taken of reductions in capital costs due to trade policy.

Further interest attaches to the relative effects of trade policies and of factor market distortions on wage-rental ratios. Apart from Chile and Tunisia, factor market distortions predominated during the period under consideration, often by a large margin. This was the case also in Pakistan, where both trade policy–induced distortions and factor market distortions were the largest among the eight countries, but the latter was much more important than the former.

It follows that the combined effects of distortions in product and factor markets on the wage-rental ratio were the largest in Pakistan (316 percent). These distortions increase the wage-rental ratio in all other countries as well, the exception being Hong Kong, which was free of product and factor market distortions. The ranking was Tunisia, 87 percent; the Ivory Coast, 45 percent; Argentina, 38 percent; Brazil, 31 percent; and Korea, 11 percent. (For lack of information, estimates could not be made for Chile.)

The ranking of countries changes if the employment effects of product and factor market distortions are considered (Table 6). At the same time, comparability between the two sets of estimates is reduced by reason of the fact that for several countries (Brazil, Ivory Coast, Pakistan, and Korea), the estimates refer to a different year. And, the effects of distortions on employment have also been esti-

mated for Colombia and Indonesia (no estimates are provided for Hong Kong, where there are no policy-imposed product or factor market distortions).

In both import-competing and export industries the impact of factor market distortions on employment was the largest in Pakistan. It was followed by Tunisia, Indonesia, and the Ivory Coast as far as the first, and by Brazil, Colombia, and Indonesia as far as the second, group of industries is concerned. Finally, differences in labor coefficients between import substituting and export industries were the largest in Indonesia, followed by Brazil, Colombia, and Pakistan.

The effects of factor market distortions on product markets. Following Gottfried Haberler's pathbreaking contribution (1950), a large number of articles in economic journals have dealt with the implications of factor market distortions for product markets. It has been shown that, under certain conditions, these distortions can lead to the wrong pattern of specialization, in the sense that the "wrong" commodity, i.e., one which does not correspond to the country's factor endowment, will be exported and the "wrong" commodity imported.

As we have seen, to a greater or a lesser extent, policy-imposed factor market distortions in the developing countries will cause the wage-rental ratio to rise. At the same time, available evidence suggests that, on the average, this has not led to factor reversal in the sense that a developing country would import labor-intensive and export capital-intensive commodities.[1]

This does not mean, however, that factor reversal would not have occurred in regard to particular commodities, with the country importing some labor-intensive and exporting some capital-intensive commodities as increases in wage-rental ratios raised the cost of the former and reduced the cost of the latter. Also, international trade is discouraged as a result of policy-imposed distortions in factor markets, which raise wage-rental ratios.

Another way to approach the issue is to consider the loss of exports that may occur, owing to distortions in factor markets. This possibility has been investigated by Anne Krueger, who has tested for the existence of a statistical relationship between labor market distortions and exports in a comparative framework.

Krueger has taken the ratio of the United Nations daily per diem allowance to per capita incomes as a proxy for the realism of the real wage, on the grounds that the former reflects largely the cost of labor-

intensive nontraded goods—and hence that of labor—in the country concerned. She has subsequently correlated this variable with per capita exports, taken as an indicator of a country's success or failure to exploit its export potential.

The tests for 33 countries in four benchmark years show a high degree of statistical significance for the real wage proxy while the coefficient of determination is in the 0.17–0.24 range. The elasticity is about 0.5, indicating that a one percent increase in the real wage relative to per capita incomes would reduce exports by one-half of one percent.[72]

Conclusion. This essay has provided evidence on the unfavorable effects that factor market distortions have on the efficiency of resource allocation and on employment in developing countries. It has further been shown that policy-imposed distortions in product markets tend to aggravate these adverse effects in the countries concerned.

Rationing in the product, labor, and capital markets also contributes to inefficiency in resource allocation by generating rent-seeking activities. Such activities misdirect productive energies and tend to lead to excess investments in activities that stand to benefit from rationing.

Inefficiencies in resource allocation, in turn, will have adverse effects on economic growth. For one thing, less is saved and invested as the distortions lower income levels. For another thing, the efficiency of investments is reduced as capital is directed into industries that do not correspond to the country's comparative advantage.

It may be objected that there will also exist endogenous distortions (factor market imperfections) in developing countries that the policymakers may wish to remedy. Thus, it had long been argued that in a number of these countries the marginal productivity of labor is low, and even nil, because of the existence of surplus labor, and that the prevalence of informal credit markets provides evidence of imperfections in capital markets. The validity of these propositions has increasingly been brought into question, however.

To begin with, drawing on macroeconomic as well as on microeconomic evidence available by the mid-1970s, Berry and Sabot concluded that "labor markets function at a comparatively high level of efficiency"[73] in developing countries. Also, a subsequent review of rural labor markets has disproved the contention that the marginal product of labor in agriculture would be nil.[74] These and other pieces of evidence have led Anne Krueger to conclude that "if earnings do

not more-or-less appropriately reflect tradeoffs and relative scarcity values of different types of labor, the observed distortion is more likely to be a consequence of government intervention than it is of inherent 'market failure'."[75]

In fact, to the extent that wages overstate the opportunity cost of labor, as has been alleged, government interventions which raise the price of labor have aggravated these imperfections. Public interventions in labor markets thus have had the opposite of the desired effect.

Finally, it should be understood that informal credit markets in the developing countries are often the result of policy distortions that limit the scope of financial intermediation. And, where this was not the case, informal credit markets should be regarded as a normal phase of the development of financial intermediation, which permit bringing together lenders and borrowers in cases when the cost of doing so through formal channels would be overly high because of lack of information, distance, and other factors.

Notes

1. B. Balassa, G. Bueno, P. P. Kuczynski and M. H. Simonsen, *Toward Renewed Economic Growth in Latin America* (Mexico, D.F.: El Colegio de Mexico, Rio de Janeiro: Fundacão Getulio Vargas, Washington, D.C.: Institute for International Economics, 1986) Ch. 4.

2. A. Lanyi and R. Saracoglu, 'Interest Rate Policies in Developing Countries,' Occasional Paper 22 (Washington, D.C.: International Monetary Fund, 1983) p. 14.

3. A. O. Krueger, *Trade and Employment in Developing Countries 3. Synthesis and Conclusions*, (Chicago: The University of Chicago Press, 1983) pp. 145-50.

4. In Pakistan, they indicate the effects of policy changes undertaken in the second half of the 1960s while the results for this country reported in Table 5 relate to the early 1960s.

5. This was the case in trade with Latin American countries, which dominated Chile's exports of manufactured goods, but not for Chile's trade with the developed countries.

6. T. P. Schultz, 'Effective Protection and the Distribution of Personal Income by Sector in Colombia,' in A. O. Krueger (ed.), *Trade and Employment in Developing Countries 2. Factor Supply and Substitution* (Chicago: University of Chicago Press, 1982) pp. 109-10.

7. Schultz, p. 110.

8. A. O. Krueger, 'The Political Economy of a Rent-Seeking Society,' *American Economic Review* LXIV (1974) p. 110.

9. B. Balassa, 'Exports, Policy Choices, and Economic Growth in Developing Countries after the 1973 Oil Shock,' *Journal of Development Economics* XVIII (1985), pp. 23-35.

10. R. Banerji and J. Riedel, 'Industrial Employment Expansion under Alternative Trade Strategies: Case of India and Taiwan, 1950–1970,' *Journal of Development Economics* VII (1980) Tables 1 and 2.

11. Balassa, Bueno, Kuczynski, and Simonsen, p. 134.

12. B. Fischer and D. Spinanger, 'Factor Market Distortions and Export Performance: An Eclectic Review of the Evidence,' Working Paper No. 259 (Kiel: Institute of World Economics, 1986) pp. 25-28.

13. D. Laidler, 'Entrepreneurship and Labour Market Mobility,' in *Growth and Entrepreneurship: Opportunities and Challenges in a Changing World* (Paris: International Chamber

of Commerce, 1981) p. 81.

14. United States Department of Health and Human Services, Social Security Administration, Social Security Programs Throughout the World 1981, Research Report No. 58 (Washington, D.C., 1984).

15. C. Mesa-Lago, *Social Security in Latin America. Pressure Groups, Stratification and Inequality* (Pittsburgh: University of Pittsburgh Press, 1978) pp. 50, 96.

16. W. A. Lewis, 'Development with Unlimited Supplies of Labour,' *Manchester School* XXII (1954) pp. 139-62.

17. Mesa-Lago, p. 16.

18. J. L. Carvalho and C. L. S. Haddad, 'Foreign Trade Strategies and Employment in Brazil,' in A. O. Krueger, H. B. Lary, T. Monson, and N. Akrasanee (eds), *Trade and Employment in Developing Countries 1. Individual Studies* (Chicago: University of Chicago Press, 1981) p. 67.

19. A. O. Krueger, 'The Relationship between Trade, Employment, and Development,' paper prepared for the 25th Anniversary Symposium on The State of Development Economics: Progress and Perspectives, Economic Growth Center (New Haven, Conn.: Yale University, 1986) mimeo, p. 16.

20. This section derives from B. Balassa, 'Public Finance and Social Policy—Explanation of Trends and Developments: The Case of Developing Countries' in *Public Finance and Social Policy* (Detroit, Michigan: Wayne State University Press, 1983) pp. 41-58.

21. L. G. Reynolds and P. Gregory, *Wages, Productivity and Industrialization in Puerto Rico* (Homewood, Ill.: Richard D. Irwin, 1965) p. 60.

22. Reynolds and Gregory, p. 100.

23. S. Watanabe, 'Minimum Wages in Developing Countries: Myth and Reality,' *International Labour Review* CXIII (1976) pp. 347.

24. L. Squire, *Employment Policy in Developing Countries—A Survey of Issues and Evidence*, A World Bank Research Publication (New York: Oxford University Press, 1981) p. 111.

25. International Labour Office, *Minimum Wage Fixing and Economic Development* (Geneva, 1968) p. 19.

26. G. Starr, *Minimum Wage Fixing* (Geneva: International Labour Office, 1981) pp. 160-84.

27. Krueger, *Trade and Employment in Developing Countries 3. Synthesis and Conclusions*, p. 131.

28. T. Monson, 'Trade Strategies and Employment in the Ivory Coast,' in Krueger, Lary, Monson, and Akrasanee (eds.), *Trade and Employment in Developing Countries 1. Individual Country Studies*, pp. 273-4.

29. J. Schaafsma and W. D. Walsh, 'Employment and Labor Supply Effects of the Minimum Wage: Some Pooled Time-Series Estimates from Canadian Provincial Data,' *Canadian Journal of Economics* XLI (1983) p. 97.

30. Krueger, *Trade and Employment in Developing Countries 3. Synthesis and Conclusions*, p. 132.

31. Watanabe, p. 354.

32. April 30, 1983.

33. Starr, p. 15.

34. An attempt to measure these effects has been made in the United States. It has been found that the income distributional effects of minimum wage legislation are very weak and "even if the elasticity of demand for low-wage labor is as low as 0.2, the reduction in national income is as large as the entire gain to the lower half of the income distribution when marginal taxation effects are ignored, and the reduction in national income is about twice as large as the net gain to the lower half of the income distribution when they are incorporated." W. R. Johnson and E. K. Browning, 'The Distributional and Efficiency Effects of Increasing the Minimum Wage: A Simulation,' *American Economic Review* LXIII (1983) p. 211.

35. Watanabe, p. 356.

36. Starr, p. 140.

37. Krueger, 'The Relationship between Trade, Employment, and Development,' p. 16.

38. B. Balassa, et al, *Turkey: Industrialization and Trade Strategy*. A World Bank Country Study (Washington, D.C.: World Bank, 1982) Ch. 4.

39. B. Balassa, et al, *Morocco: Industrial Incentives and Export Promotion*. A World Bank Country Study (Washington, D.C.: World Bank, 1984) Table 3.3.

40. C. Leechor, 'Tax Policy and Tax Reform in Semi-Industrialized Countries,' Industry and Finance Series, Vol. 13 (Washington, D.C.: World Bank, 1986) p. 14.

41. Balassa, *Morocco: Industrial Incentives and Export Promotion*, p. 104.

42. This section derives from Balassa, 'Public Finance and Social Policy—Explanation of Trends and Development: The Case of Developing Countries.'

43. P. S. Heller and A. A. Tait, 'Government Employment and Pay: Some International Comparisons,' Occasional Paper 24 (Washington, D.C.: International Monetary Fund, 1983) pp. 7, 42-3.

44. Heller and Tait, p. 7.

45. Heller and Tait, p. 18.

46. Heller and Tait, p. 18.

47. D. L. Lindauer and R. H. Sabot, 'The Public-Private Wage Differential in Poor Urban Economy," *Journal of Development Economics* XII (1983) pp. 141-3.

48. G. Psacharopoulos, 'Education and Private versus Public Sector Pay,' *Labour and Society*, VIII (1983) pp. 123-34.

49. S. Guisinger, with the assistance of M. Irfan, 'Trade Policies and Employment: The Case of Pakistan,' in Krueger, Lary, Monson, and Akrasanee (eds.), *Trade and Employment in Developing Countries 1. Individual Studies*, pp. 325-6.

50. Balassa, Bueno, Kuczynski and Simonsen, pp. 105-6.

51. It has been estimated that the adoption of below-equilibrium interest rates reduced capital costs by 53 percent in Pakistan and between 9 and 3 percent in Argentina, Korea, Tunisia, Brazil, and the Ivory Coast in the early 1960s and the early 1970s (Table 5). In interpreting these estimates, it should be understood that capital costs include the cost of machinery and equipment.

52. M. J. Fry, 'Interest Rates in Asia,' (Honolulu: University of Hawaii, 1981), mimeo.

53. A. Giovannini, 'Saving and the Real Interest Rates in LDC's,' *Journal of Development Economics* XVIII (1985) pp. 197-218.

54. In view of these error possibilities, it may be surprising that statistically significant results have been obtained for five countries (also, in two additional countries, t-values exceed 2).

55. Lanyi and Saracoglu, p. 19.

56. Lanyi and Saracoglu, Table 4.

57. R. I. McKinnon, *Money & Capital in Economic Development* (Washington, D.C.: The Brookings Institution, 1973).

58. E. S. Shaw, *Financial Deepening in Economic Development* (New York: Oxford University Press, 1973).

59. S. van Wijnbergen, 'Interest Rate Management in LDC's,' *Journal of Monetary Economics* XII (1983) pp. 433-52.

60. At the same time, a positive response of savings to interest rates was established in the pre-reform, but not in the post-reform, period. J. de Melo, and J. Tybout, 'The Effect of Financial Liberalization on Savings and Investment in Uruguay,' *Economic Development and Cultural Change* XXXIV (1986) pp. 561-87

61. Evidence on the latter point is provided in Krueger, *Trade and Employment in Developing Countries 3. Synthesis and Conclusions*, p. 129.

62. Balassa et al, *Turkey: Industrialization and Trade Strategy*, Table 3.8. While changes have been made in subsequent years, a considerable spread between lending and deposit rates remains.

63. In the case of Mexico, the domestic interest rate variable has been highly significant in explaining changes in capital flight in a time-series investigation. And while this has not been the case for other countries, it should be understood that data on capital flight are subject to considerable error. J. T. Cuddington, 'Capital Flight: Estimates, Issues, and Explanations,' CPD Discussion Paper No. 1985-51 (Washington, D.C.: World Bank, 1986) Table 3.

64. J. A. Hanson and C. R. Neal, 'Interest Rate Policies in Selected Developing Countries 1970-1982,' Industry and Finance Series, Vol. 14 (Washington, D.C.: World Bank, 1986) pp. 37-39.

65. This section draws on Balassa, Bueno, Kuczynski, and Simonsen, Ch. 3.

66. Leechor, p. 20.

67. Leechor, pp. 17-8.

68. Guisinger, p. 333.

69. Leechor, pp. 35-7.

70. R. Boadway, 'Investment Incentives, Corporate Taxation, and Efficiency in the Allocation of Capital,' *Economic Journal* LXXXVIII (1978) pp. 480.

71. In the case of Chile, preferential trade with other Latin American countries, rather than factor-market distortions, appears to have given the perverse result noted above.

72. Krueger, 'The Relationship between Trade, Employment, and Development,' pp. 36-39.

73. A. Berry and R. M. Sabot, 'Labour Market Performance in Developing Countries: A Survey,' *World Development* VI (1978) p. 1230.

74. H. P. Binswanger and M. R. Rosenzweig, *Contractual Arrangements, Employment, and Wages in Rural Labor Markets in Asia* (New Haven, Conn.: Yale University Press, 1984) Ch. 1.

75. Krueger, 'The Relationship between Trade, Employment, and Development,' pp. 17-18.

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