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# Globalization

## A New Role for Developing Countries in an Integrating World

*Shigeru Otsubo*

In the coming decade, developing regions will play an expanded role in the world economy. Economic development will be propelled by rapid growth in world trade and accelerated integration of trade and capital flows. Dragging the old anti-export bias (typically manifested in overvalued currency) into the rapidly globalizing market will be dangerous, even suicidal, for developing countries.

# Summary findings

Otsubo reviews trends and developments in world trade, investigating the elements involved in the accelerated integration of world trade in the past decade. Focusing on the changing strategies and role of low- and middle-income countries, Otsubo explores what conditions and policy initiatives make it easier for countries to benefit from global trade and capital flows. He concludes:

• World trade relative to world income has grown more in the 1990s than in the 1970s or 1980s, mainly because of three factors: the desynchronization of business cycles in Japan, Europe, and the United States; the expanded role in world trade of developing countries, especially in East Asia and Latin America; and the transfer of purchasing power (in the form of international capital flows) that supported heightened import demand among developing countries.

• Measured as the ratio of trade to output, the trend toward global integration accelerated sharply in the mid-1980s, with a reversal in the once-slowed trend toward trade integration for OECD countries. A wave of liberalization among low- and middle-income countries resulted in an upward kink in their trade/output ratio in the mid-1980s, representing a shift from an inward-oriented development strategy to an outward-oriented one.

• World trade will grow more than 6 percent a year (on average) in the coming decade, but prospects for trade integration differ by region. East Asia, with its sizable market and autonomous forces of regional integration, should experience sustained integration into the world market. In Latin America, Eastern Europe, and Central Asia, continued integration into world trade will depend on capital inflows. Countries in the Middle East, North Africa, and Sub-Saharan Africa have depended and will continue to depend on favorable terms of trade and on capital flows for integration into the world market. (And Sub-Saharan Africa will remain dependent on official capital flows.)

• Balanced integration — with export and import capacities expanding sustainably — can be achieved only through prudent, complementary domestic and border policies that encourage long-term productive investment in the export sector.

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# Globalization

## —A New Role for Developing Countries in an Integrating World—

by

Shigeru Otsubo

International Economic Analysis and Prospects Division

International Economics Department

The World Bank

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# EXECUTIVE SUMMARY

<u>Introduction</u>

1.      The observed robustness of world trade growth in the early 1990s, when OECD economies were successively in recession, turned our attention toward the changing and expanded role of low and middle income countries (LMICs) in world trade. This naturally led to the following set of questions:

a)  How importantly have LMICs contributed to the sustained growth in world trade in the 1990s?

b)  What are the elements that supported the LMICs' expanded role in creating trade?

c)  Are these elements temporary, or are they structural and likely to stay?

d)  Has there been a sea change in development strategy, a shift from an inward-oriented to an outward-oriented framework designed to create a virtuous cycle of higher integration and faster growth under an expanded opportunity set?

e)  Who have been successful integrators into global trade market? Who have been unsuccessful integrators? Who have been lagging integrators?

f)  What separates successful integrators from others? What implications for integration strategy can be drawn from past successes and failures?

2.      This study reviews the past trends and recent developments in globalization through trade integration. It also investigates both short-term cyclical and longer-term structural elements underlying the accelerated process of global trade integration observed in the past decade, focusing on the changing strategy of and role for LMICs. The study also discusses the overall prospects for the coming decade, and explores the set of conditions and policy initiatives found among the set of successful and sustained integrators of LMICs.

<u>Developments in World Trade in the Early 1990s—Decoupling of Trade and Output?</u>

3.      The growth of world trade relative to world income has been much higher in the 1990s than anything experienced in the 1970s or 1980s. In 1994, world merchandise trade volume is estimated to have grown by 9.2 percent, which, in relation to world GDP growth of 2.8 percent, implies an elasticity of world trade of 3.3 with respect to GDP. That is more than twice the 1.5 trade elasticity that prevailed in the 1970s and 1980s. It is also much higher than in any single year in that period, including 1976 and 1984, which, like 1994, were years of cyclical upswing from world recession. Even more remarkable, although world trade growth slowed from a buoyant 6.1 percent in the late 1980s, when world output expanded by an average of 3.3 percent, it maintained an average of 4.1 percent in the recessionary period 1991-93, when world GDP growth averaged only

1.1 percent. The 3.7 average world trade elasticity in 1991-93 was even higher than in 1994. By contrast, world trade had experienced negative growth in the previous two recessions—negative 3.0 percent in 1974-75 and negative 1 percent in 1981-82. Have we therefore observed a decoupling of world trade and output movements?

4.      Three major factors worked in favor of sustaining trade growth in 1991-93: the desynchronization of business cycles in the United States, Japan, and Europe; the continuation and even acceleration of growth in the developing world, notably in East Asia and Latin America, which became the new growth poles; and the effective transfer of purchasing power through a surge in private capital flows to highly absorbent LMIC regions, namely East Asia and Latin America.

5.      In contrast to the two previous cycles, when OECD countries were subject to common external shocks—the two oil price hikes—and pursued similar policy responses, including sharp monetary tightening, the last downturn in the industrial countries was inspired more by forces internal to each country or region. In the United States, these forces were corporate balance sheet deterioration at the end of the 1980s and fiscal consolidation; in Japan, the "bubble economy" in the second half of the 1980s and the subsequent collapse in stock and property markets; in Europe, the stimulus of German unification and the subsequent monetary tightening needed to curb inflationary consequences. Desynchronized business cycles were reflected in a more stable pattern of overall OECD import demand, which grew on average by 1.8 percent a year in 1991-93, compared to declines of more than 11 percent in 1975 and 2.7 percent in 1981-82.

6.      A noteworthy factor in the recent dynamism of world trade has been the new role of the developing countries, especially in East Asia and Latin America. In 1991-93, output growth accelerated in these two regions despite a slowdown in the world aggregate. East Asia's output grew by an average of 8.7 percent a year in 1991-93, accelerating from 7.4 percent average yearly growth in the preceding decade. In Latin America, output grew an average of 3.2 percent a year during 1991-93, accelerating from 1.2 percent average yearly growth in the 1980s. During this period, 54 percent of the growth of world trade volume was generated by the LMICs, excluding Former Soviet Union, despite their share of less than 20 percent in total world trade in 1991. East Asia's and Latin America's contributions were 29 percent and 17 percent, respectively.

7.      Despite the ongoing OECD recovery, the OECD share of contribution is not expected to reach the high levels observed in earlier business cycle recovery phases, reflecting the projected high pace of LMIC trade integration. In fact, OECD's contribution to incremental world trade growth will be limited to just over 60 percent, and LMICs will continue to claim about a quarter of the growth in world import demand (of which more than half will accrue to East Asia). The increased role of LMICs in trade creation is likely to stay.

8.      Finally, there was a surge of private capital flows to developing countries, motivated in part by successful policy reforms and export success. Flows totaled

$325 billion during 1991-93 and an estimated additional $173 billion in 1994, and provided, for the recipient countries, much more financing for imports than they were able to use. During the oil price hikes of 1973-74 and 1979-80, purchasing power was transferred to oil exporting countries through changes in terms of trade (and eventually reached other LMIC regions, notably Latin America, in the form of private capital flows). These transfers were translated into higher import demand by direct and indirect recipient regions. A surge in capital flows—targeted to highly absorbent regions such as East Asia and Latin America—has been creating heightened import demand among recipients in a more direct manner, supporting the growth of world trade.

9. Results from Granger causality tests between reserve positions and nominal import values (goods and services) imply that import capacity tends to be strongly binding in Latin America, South Asia, Sub-Saharan Africa, and Europe and Central Asia (ECA); and mildly binding in Middle East and North Africa. It is not likely to be a binding factor in East Asian import demand. However, in Asia, a surge in import demand has been largely sustained by regional trade integration, fueled by intra-regional foreign direct investments and by expansion in trade-related credits. In 1991-93, on average, foreign direct investment accounted for 54 percent of private long-term capital inflow into East Asia, followed by private loans dominated by banks' export credits guaranteed by official and private export credit institutions. By looking at recent movements in net resource flows to LMIC regions and the contribution of these regions to world trade, and by noting the aforementioned aspects of East Asian capital flows, it becomes obvious that the recent surges in private capital flows into these regions have supported high import demand out of these regions.

Waves of Liberalization since the Mid 1980s—A Revolution in Development Strategy

10. The 1991 inaugural issue of the World Bank's *Global Economic Prospects and the Developing Countries (GEP91)* stated that:

> All through the period 1950-90, international trade grew faster than output. The rapid growth of world trade in the 1950s and 1960s was due partly to a recovery from the stagnation of the interwar years. It was spurred by buoyant growth in industrial countries, reduced barriers to trade, low world inflation, modest real rates of interest, and expanding real resource transfers to developing countries. But many of these trends were reversed in the 1970s and 1980s. The growth of international trade slowed markedly and the gap with world output growth narrowed.... The forces for trade liberalization have weakened since the mid 1970s, when industrial countries began to establish new barriers to trade. By 1986, almost 16 percent of OECD imports were covered by nontariff barriers.... The protectionist trend in developing countries has been similar.

11. Looking back, however, there was a marked acceleration in world integration through trade again in the mid 1980s. Measured by a ratio of trade to output, this meant a reversal in the trend in trade integration for OECD, which had been slowed by the macroeconomic instabilities and heightened nontariff barriers in the 1970s and early

1980s—an evolution in the process of economic integration. Emerging LMIC markets, a decline in commodity prices, a surge in foreign investment activities after the Plaza accord, and a series of bilateral and regional trade arrangements such as an expansion of the EU and the US-Canada free trade agreement, put OECD economies back on an accelerated integration path.

12.    For LMIC as a whole, a rising trend in trade integration was a rather new phenomenon. In fact, out of the 16 percent rise in LMICs' trade integration ratio (trade/GDP) in the past three and a half decades, a 15 percent surge was observed only after the mid 1980s. From the mid 1980s until the early 1990s, an increasing number of developing economies were liberalizing trade, mostly unilaterally. In Asia, liberalization spread from Taiwan and Korea to Southeast Asia and on to China. In Latin America, it spread from Chile to Mexico and beyond. This largely unilateral wave of liberalization among LMICs that resulted in an upward kink in the trend of their trade/output ratio since the mid 1980s represents an effective shift in development strategy from an inward-oriented to an outward-oriented framework designed to form a virtuous cycle of higher integration and faster growth under an expanded opportunity set—a revolution in development strategy.

13.    What happened in the early 1990s, often characterized as trade-output decoupling, was an enormous acceleration in the speed of LMIC trade integration into the world market (defined as a rate of growth of trade minus that of output), which compensated for a deceleration in trade integration among OECD, where integration is highly pro-cyclical. Between two adjacent periods of smooth world output expansion (1986-90) and OECD recession (1991-93), world aggregate speed of trade integration was in fact kept, on average, at a constant level. However, the movements in different income groups were startlingly dissimilar. LMICs have seen tremendous acceleration in the speed of trade integration, from a slow pace of 0.7 percent a year to a galloping 6.4 percent a year, while OECD's pace of integration decelerated from over 3 percent a year to 1.1 percent a year in the latter half of the 1980s. With LMICs playing an increased role in the world trade market, a robust trade growth of over 6 percent a year, on average, is projected for the coming decade.

Balance and Sustainability of LMICs' Integration into Global Markets

14.    Liberalization measures taken by the developing countries since the mid 1980s have paved the way for these economies to integrate into the world market in order to enjoy faster growth under an expanded opportunity set. However, the path to integration has not been smooth for every country or region.

15.    The first phase of trade policy reform in East Asia, in which obstacles to exporting were removed, typically involved unifying and devaluing the exchange rate and eliminating quantitative restrictions on imports of intermediate and capital goods. The second phase, in which tariffs began to be gradually reduced, generally commenced only after the balance of payments was strengthened. China, Indonesia, and the Philippines initiated reform with

substantial real depreciation, but only China and Indonesia sustained and even enlarged the level of devaluation. The Philippines experienced real appreciation from the year of reform to 1992. Indonesia succeeded in trade integration in both exports and imports during the adjustment process. The Philippines also experienced higher trade integration through expansion of both sides; however, import growth overtook export growth due to real appreciation, which resulted in persistent balance of payments problems.

16.     In Latin America, liberalization reduced both import/export impediments (tariff rates and quantitative restrictions) and restrictions on foreign exchange markets. Reforms in Chile, Columbia, and Mexico—the early reformers—were characterized by initial efforts to devalue their currencies. Argentina, Brazil, Peru, and Venezuela—the late reformers—had a higher degree of anti-export bias and distortions manifested in higher black market premia before the reform. Initially, the premia were reduced in these economies, except in Brazil, where galloping inflation undermined the reform efforts. All major Latin American reformers achieved a higher pace of trade integration and market openness. However, an unbalanced import-dominant integration was particularly visible for Argentina, Brazil, and Mexico. Dominance of import growth was also evident for Peru.

17.     In Mexico, the aggregate trend rate of trade integration was fairly constant before and after the reform. However, the components shifted drastically during the reform, with import growth overtaking export growth as the cause of overall trade integration. Mexico initially succeeded in depreciating the real effective exchange rate (26.2 percent depreciation between 1985 and 1986). However, the currency began to appreciate after it was pegged to the US dollar, as foreign capital inflow revived and nominal depreciation lagged behind the rate of inflation, producing a net appreciation of 3.7 percent up to 1992. This undermined the efforts to reduce anti-export bias and brought out an unbalanced integration. Argentina, Brazil, and Peru all share, by and large, the risk of unbalanced trade integration, since none of these countries has successfully removed anti-export bias through their reform package.

18.     In Chile, the trend in export/GDP ratio turned slightly positive in 1991-93, as opposed to negative 0.9 percent in 1986-90. Although Chile's export success is still limited in scope, that success has been due to the openness of its import regime and significant real devaluation of the currency. Chile's commitment to avoiding real appreciation and maintaining stability in the real exchange rate in order to preserve the competitiveness of the export sector was noted. Although, as in Mexico, large capital inflows had put pressure to appreciate on the Chilean peso, the government had attempted to stem the short-run inflows to avoid revaluation. With these prudent reform measures, Chile's export growth accelerated from 5.6 percent a year, on average, during 1986-90 to 7.5 percent a year for 1991-93 despite the slowdown in OECD. Thus, Chile has a potential to join the group of successful trade integrators.

19.     Although the LMIC regions are projected to contribute around 30 percent to incremental world trade during the coming decade, prospects for trade integration differ

by region. East Asia, with its sizable market and autonomous regional integration forces, can be considered a structural integrator with prospects of sustained integration into the world market. Latin America and Eastern Europe and Central Asia have been contingent integrators in which the process of integration will continue to depend on capital inflow. Lagging integrators in Middle East, North Africa, and Sub-Saharan Africa have been and will continue to be dependent on favorable terms of trade and capital flows—in the case of Sub-Saharan Africa, official flows—for their integration into the world market. So far the evidence shows that only structural integrators have been able to build a sustainable virtuous cycle of higher speed of integration and higher output/income growth.

Implications for Integration Strategy

20.    The largely unilateral wave of liberalization among developing countries observed since the mid 1980s represents an effective shift in development strategy from an inward-oriented to an outward-oriented (export-promoting) framework designed to create a virtuous cycle of higher integration and faster growth under an expanded opportunity set. However, evidence shows that dragging the legacy of the old framework—the anti-export bias that is typically manifested in overvalued currency—when one enters the rapidly globalizing market is dangerous, even suicidal. A real exchange appreciation not only prices exports out of world markets, on the demand side, but also takes resources out of the tradable (export) sector by increasing the price of nontradables relative to tradables, on the supply side. Aggregate effects of the appreciation on investment are ambiguous; however, this appreciation unambiguously reduces investments in export-oriented sectors. The failure to foster productivity and export competitiveness by eliminating anti-export bias in the open framework has resulted in balance of payment difficulties, forced contraction, and lower levels of growth.

21.    Another problem is that excessive dependence on capital inflow, whether private investment or official assistance, puts pressure on currency. Therefore, careful management is called for. Official assistance, for instance, should not be carelessly directed to general expenditures that, on balance, favor nontradable sectors.

22.    Balanced integration to the rapidly globalizing world market calls for sound growth of exports or a firm commitment for future export growth. This can be attained only by a prudent combination of complementary domestic and border policies that encourage long-term productive investment in the tradable (exportable) sector, supported by foreign capital and domestic savings drawn in by higher expected rates of return due to efficiency gains attained through reforms. Preserving a perceived rate of return on investment—in tradable and complementary sectors—for both domestic and foreign investors is a key to becoming a structural integrator in which export and import capacities both expand in a balanced, sustainable manner. Further research efforts are called for in identifying possible paths for LMICs to become sustainable, structural integrators into the world market.

# I. Introduction—Globalization through Trade Integration[*]

Globalization, defined as the integration of production, distribution, and use of goods and services among the economies of the world, has been evolving since the end of World War II. The signs of globalization are manifested at a factor level in the increasing flows of capital and labor, and at the product level in a resounding growth in world trade—above and beyond the growth of world output (see Chart 1).

### Chart 1. Growth in World Trade and GDP, 1960-1994
### (trade in goods and services)

(Index 1960=100)

World Trade (volume)

World Output (volume)

Source: International Economics Department, World Bank.
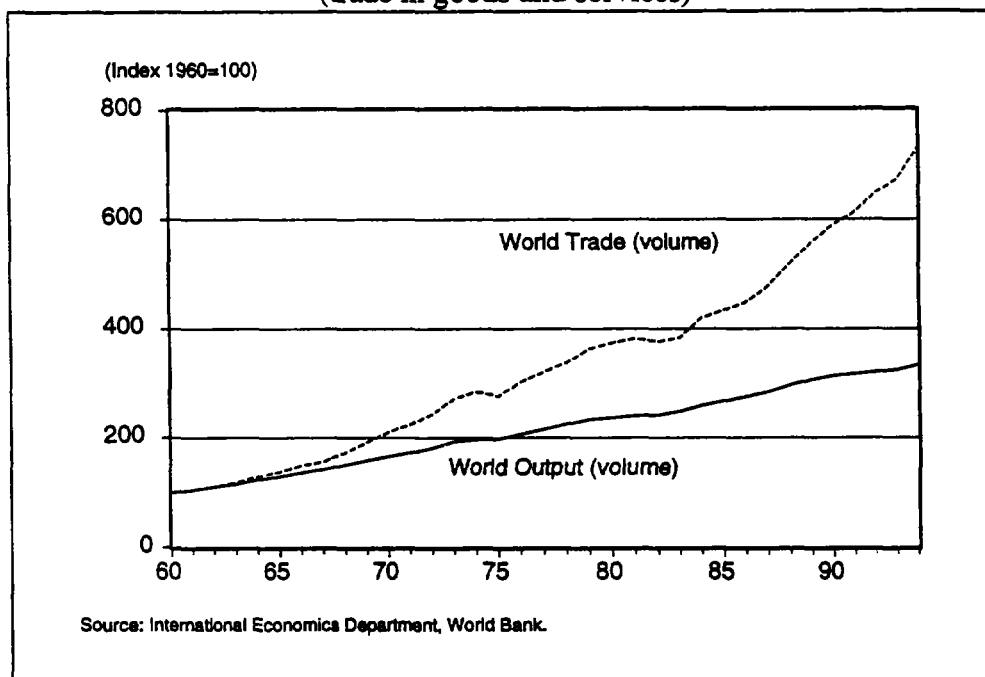
A ratio of trade (exports and imports) to output/expenditures is one overall ex-post measure of world integration. Speed of integration, defined as the difference between the growth rates of trade and of GDP, is the first order approximation of the rate of change in the trade/output ratio, and is commonly used to measure the pace of world integration. World aggregate trade/output ratio more than doubled in the past 35 years, from 21 percent in 1960 to 46 percent in 1994. During the same period, the ratio for low and middle income countries (LMIC)[1] increased from 31 percent in 1960 to 47 percent in 1994. The world speed of integration has not been constant during these years; there have been periods of rapid integration and stagnation (see Chart 2). However, except for periods of macro instability, the world has kept a positive pace of integration since 1950; that is, international trade has grown faster than output. In this context, recent waves of

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[*] The author is an economist with the World Bank's International Economics Department. The findings, interpretations, and conclusions are the author's own and should not be attributed to the World Bank, its Executive Board of Directors, or any of its member countries.

[1] For income and regional groupings of economies, see Appendix A.

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globalization—one beginning in the mid 1980s and the other in the early 1990s—might be seen as a mere evolution in the process of economic integration. Chart 2 shows that for LMICs, however, the rising trend in trade integration that started in the mid 1980s was a rather new phenomenon. In fact, out of the 16 percent rise in LMICs' trade integration ratio (trade/GDP) in the past 35 years, a 15 percent surge was observed only after the mid 1980s. A series of reform and liberalization efforts undertaken by LMICs in the past decade represents an effective shift in development strategy from an inward-oriented import-substituting framework designed strategically to reduce dependence on the outer world, to an outward-oriented export-promoting framework designed to create a virtuous cycle of higher integration and faster growth with expanded opportunities. As far as LMICs are concerned, therefore, this upward kink in the integration trend is a revolution that signifies a shift in development strategy.

Chart 2. Trade Integration
(export plus import volumes, ratio to GDP*)



Percent

Legend:
-------- World
——— High Income Countries
——— Developing Countries (LMIC)

*Based on National Income Accounts, Trade in Goods and Services.

Source: International Economics Department, World Bank.

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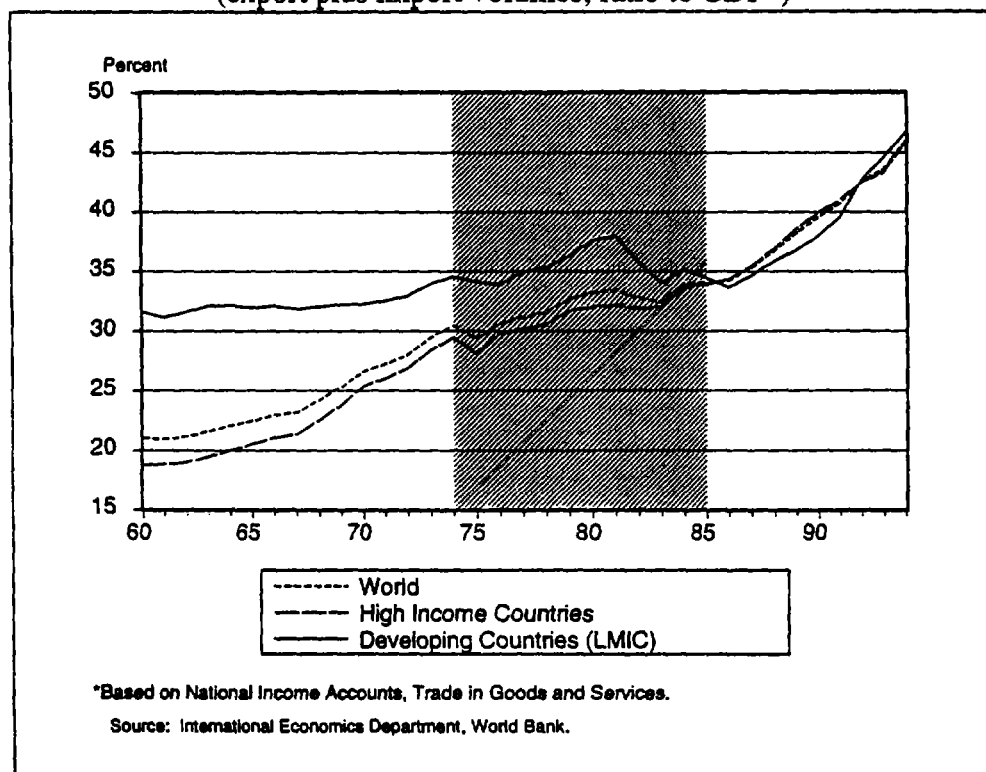
The relocation and integration of production processes across national borders has been reinforced by increasing flows of private capital, especially in the form of foreign direct investment (FDI), which is often associated with global production strategies of transnational corporations (see Chart 3). Technological progress that reduces the cost of transportation, communications, and financial transactions, coupled with declining trade barriers, has enlarged opportunity for anyone searching for less costly production bases for exports and for spot production for local markets. From the point of view of the recipients, capital inflows enlarge import capacity above and beyond export earnings for a certain period. If inflows are used to increase domestic supply capacity and augment international competitiveness, countries are rewarded with higher productivity growth and export earnings, which preserves their import capacity in the longer run, thus creating a virtuous cycle of high growth and trade integration.

Chart 3. Aggregate Net Resource Flows to LMIC, 1970-1994



Source: International Economics Department, World Bank.
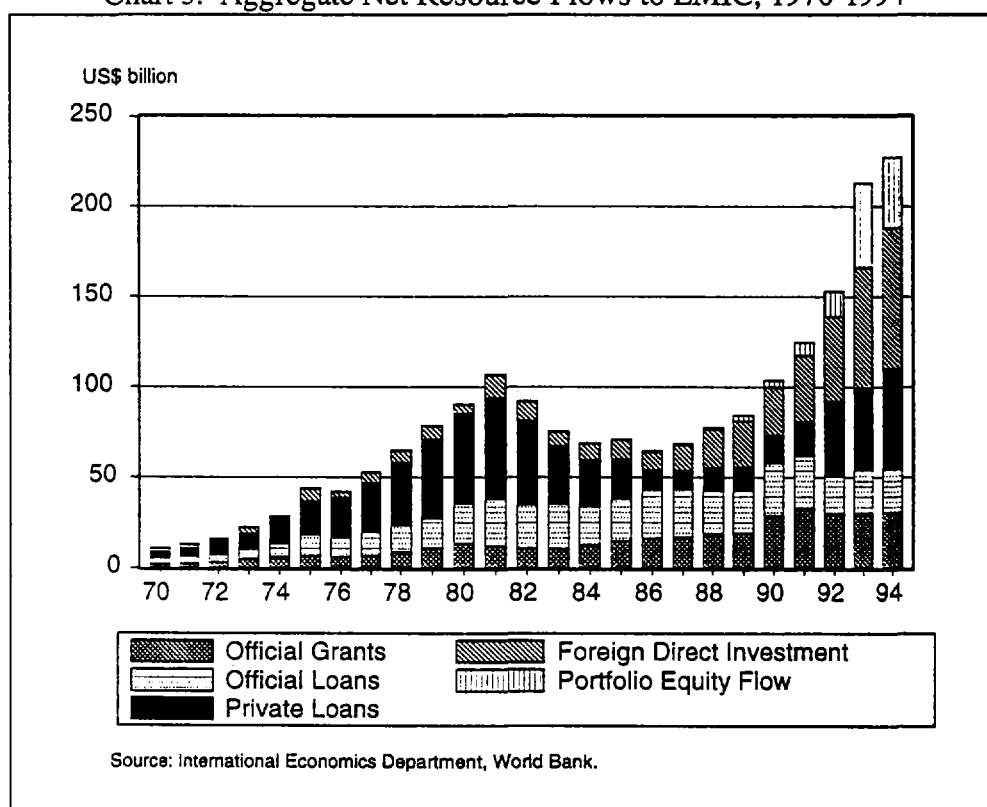
Countries that failed to productively mobilize the (temporary) transfer of purchasing power, through either terms of trade changes or capital inflows, formed unbalanced trade integration that accumulated debt without building bases for higher future export earnings. Faced with debt crisis, forced austerity, and import compression, these economies had their long-term productivity growth and export earning capacity hindered severely. Chart 4 shows the correlation between speed of integration into world markets and GDP growth for 18 major LMIC economies. Countries with successful trade integration are seen in the upper right quadrant, while economies with unbalanced integration are situated in the lower right quadrant.

### Chart 4. Speed of Trade Integration and GDP Growth, 1970-1992
### (18 major developing economies)



Source: International Economics Department, World Bank.
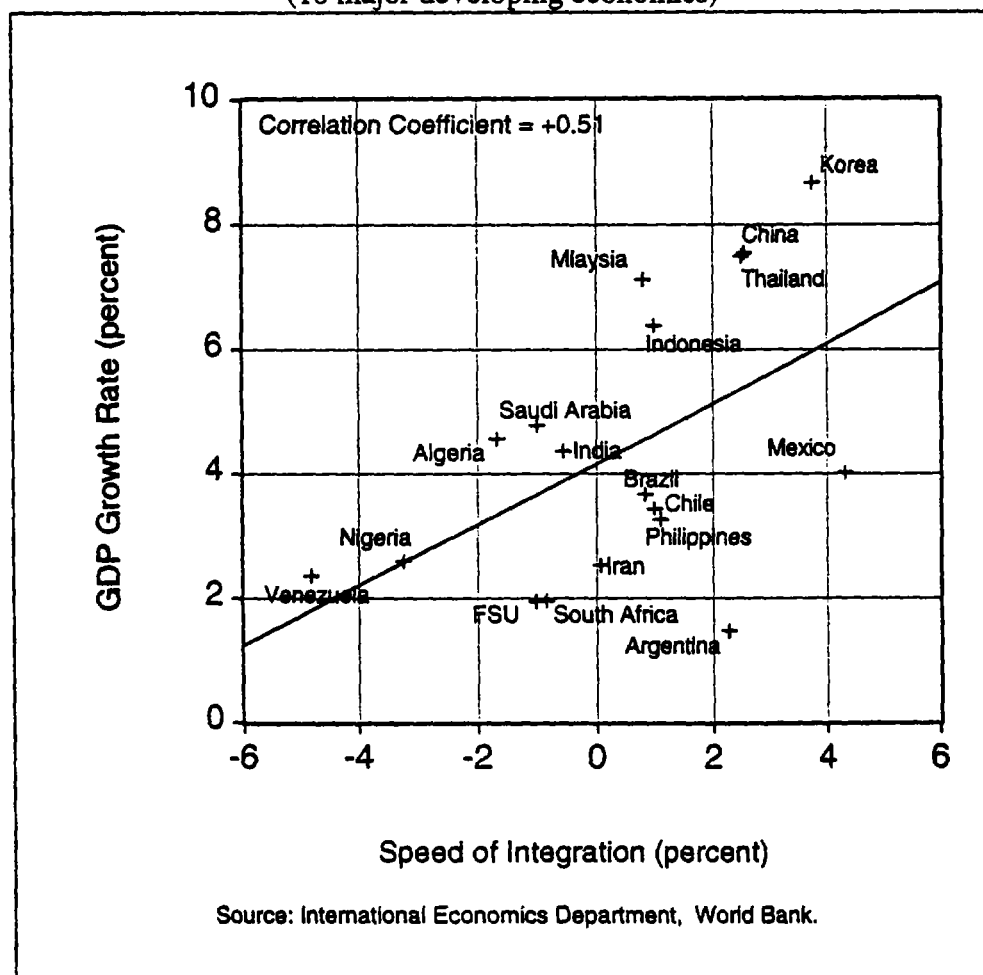
The following section introduces and analyzes observed developments in world trade during the first part of 1990s. It presents seemingly decoupling world output and trade activities in the early 1990s—sustained world trade growth in spite of a slowdown in world output growth—and introduces three major underlying factors. The three factors that worked in favor of sustaining trade growth in the early 1990s are: the desynchronization of business cycle patterns among the three growth poles in OECD;[2] the new role of developing countries in world trade; and the role of international capital flow as a form of purchasing power transfer in world trade integration. The emergence of new world growth and import engines in East Asia and Latin America, where output growth accelerated into the 1990s despite the slowdown in OECD and in world aggregate output, was made possible, in turn, by strong growth in domestic absorption buoyed by successful reform and adjustment policies in these regions. It was also made possible by their strong export growth brought by penetration into OECD markets and robust intra-regional trade, and by a surge in capital inflow that alleviated import capacity limitations.

The third section further investigates the structural forces of the observed new role for LMICs. By analyzing past trends in LMICs' participation in international trade and world integration—particularly developments in the most recent decade—the paper confirms that this new robustness in world trade growth has been brought about—at least to a substantial degree—by the structural changes and liberalization drives that many developing countries undertook in the mid 1980s to early 1990s. This largely unilateral wave of liberalization among developing countries represents an effective shift in development strategy from an inward-oriented to an outward-oriented (export-promoting) framework designed to create a virtuous cycle of higher integration and faster growth under an expanded opportunity set. Thus the paper shows that what happened in the early 1990s—characterized as trade-output decoupling—was an enormous acceleration in the speed of LMIC trade integration into the world market, which compensated for a deceleration in trade integration among the OECD countries, where the integration is highly pro-cyclical. Given the surge in outward-oriented development strategy, supported by a favorable trade environment created by the GATT Uruguay Round, this section also uses the BANK-GEM[3] to project the dynamics of world integration through trade for the coming decade. With LMICs playing an increased role in the world trade market, a robust trade growth of over 6 percent a year, on average, is projected for the coming decade.

The fourth section examines the balance and sustainability of trade integration on the part of developing countries. Liberalization measures taken by the developing countries since the mid 1980s have paved the way for these economies to integrate into the world market in order to enjoy faster growth under an expanded opportunity set. However, for some economies, the path to integration has not been smooth. The paper shows that dragging the legacy of the old inward-looking strategy into the globalizing world—i.e., a continuing anti-export bias often manifested in an overvalued exchange rate—has often proved disastrous. One has to have something to sell (export) to join and

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[2] Throughout this paper, OECD refers to high-income OECD countries, excluding Mexico.
[3] BANK-GEM, the World Bank's Global Econometric Model, was created and is maintained by the Bank's International Economics Department.

stay in the world market. The paper asserts that a balanced integration into the rapidly globalizing world market calls for sound growth of exports or a firm commitment for future export growth. This can be attained only by a prudent combination of complementary domestic and border policies that encourage long-term productive investment, supported by savings drawn in by higher expected rates of return due to efficiency gains from reforms that encourage exports.

The fifth and the final section summarizes the findings and messages of the paper. Although the LMIC regions are projected to contribute around 30 percent to incremental world trade during the coming decade, prospects for trade integration differ by region. East Asia, with its sizable market and autonomous regional integration forces, can be considered a structural integrator with prospects of sustained integration into the world market. Latin America and Eastern Europe and Central Asia have been contingent integrators in which the process of integration will continue to depend on capital inflow. The Middle East, North Africa, and Sub-Saharan Africa region has been and will continue to be dependent on favorable terms of trade and capital flows—in the case of Sub-Saharan Africa, official flows—for their integration into the world market. So far the evidence shows that only structural integrators have been able to build a sustainable virtuous cycle of higher speed of integration and higher output/income growth. Further research efforts are called for to identify possible paths through which LMICs can become sustainable, structural integrators into the world market.

## II. Developments in World Trade in the Early 1990s—Decoupling of Trade and Output Growth?

Chart 5. Growth of World Exports and GDP, 1971-1997



Source: International Economics Department, World Bank, August 1995.
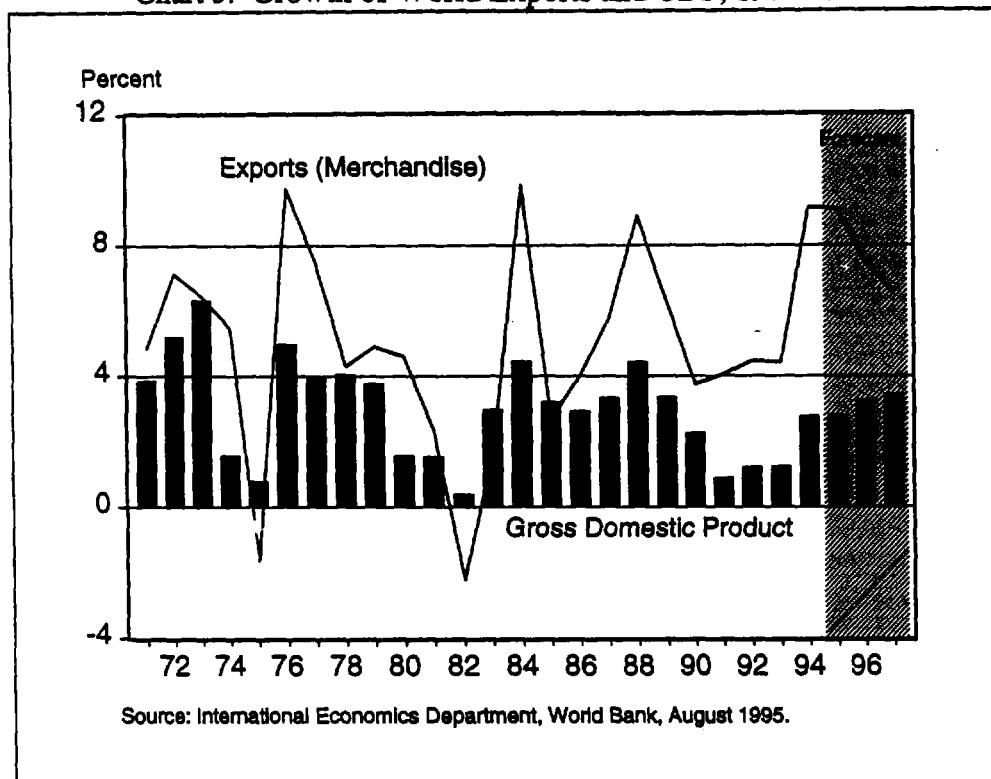
The growth of world trade relative to world income has been much higher in the 1990s than in the 1970s or 1980s (see Chart 5). In 1994, world merchandise trade volume is estimated to have grown by 9.2 percent, which, in relation to world GDP growth of 2.8 percent, implies an elasticity of world trade of 3.3 with respect to GDP.[4] That is more than twice the trade elasticity of 1.5 that prevailed in the 1970s and 1980s. It is also much higher than in any single year in that period, including 1976 and 1984, which, like 1994, were years of cyclical upswing from world recession. Even more remarkable, although world trade growth slowed from a buoyant 6.1 percent in the late 1980s, when world output expanded by an average of 3.3 percent, it maintained an average of 4.1 percent in

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[4] Growth in world export volume soared from 4.4 percent in 1993 to 9.2 percent in 1994, as the surge in European import demand associated with economic recovery was added to already strong import demand in the United States, East Asia, Latin America, and even Japan (where a strengthening yen and continued market opening and deregulation have overridden the effects of domestic recession). The data suggest that these patterns have persisted for the most part into 1995, with import demand continuing to grow rapidly in almost all regions and the stimulus from Europe remaining especially notable. The only exception is Latin America, where recession in Mexico and accelerated balance of payments adjustment in Argentina are expected to generate a 3-4 percent fall in regional import volumes.

the recessionary period 1991-93, when world GDP growth averaged only 1.1 percent (see Table 1). The 3.7 average world trade elasticity in 1991-93 was even higher than in 1994. World trade had experienced negative growth in the previous two recessions, negative 3.0 percent in 1974-75 and negative 1 percent in 1981-82. Have we therefore observed a decoupling of world trade and output movements?

Table 1. World Trade Growth, Output Growth, and Trade Elasticity[5]

| | 1971-85 | 1986-90 | 1991-93 | 1994-96[a] |
|---|---|---|---|---|
| | 3.7 | 6.1 | 4.1 | 8.7 |
| | 3.2 | 3.3 | 1.1 | 2.9 |
| | 1.2 | 1.8 | 3.7 | 3.0 |

a. Estimates and Forecast.
b. Growth rate of export plus import volumes of merchandise.
c. World trade elasticity = growth rate of world trade / growth rate of world output.
Source: International Economics Department, World Bank, August 1995.

Three major factors worked in favor of sustaining trade growth in 1991-93: the desynchronization of business cycles in the United States, Japan, and Europe; the continuation and even acceleration of growth in the developing world, notably in East Asia and Latin America which became the new growth poles; and the effective transfer of purchasing power through a surge in private capital flows to highly absorbent LMIC regions, namely East Asia and Latin America.[6]

In contrast to the two previous business cycles, when the United States, Japan, and Europe hit their cyclical troughs at about the same time, in 1975 and 1982-83, fluctuations in activity in the three OECD regions in the early 1990s were desynchronized to a considerable extent. The United States reached its peak in the last cycle in 1989 and a trough in 1991, and has been in an upswing since then, while Europe and Japan reached their respective peaks in 1990 and 1991 and did not reach troughs till 1994. In contrast to the two previous cycles, when OECD countries were subject to common external shocks—the two oil price hikes—and pursued similar policy responses, including sharp monetary tightening, the last downturn in the industrial countries was inspired more by forces internal to each country or region. In the United States, these forces were corporate balance sheet deterioration at the end of the 1980s and fiscal consolidation; in Japan, the "bubble economy" in the second half of the 1980s and the subsequent collapse in stock and property markets; in Europe, the stimulus of German unification and the subsequent monetary tightening needed to curb inflationary consequences.

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[5] Global forecasts are created using BANK-GEM. Long-term forecasts were created in February 1995 for *Global Economic Prospects and the Developing Countries 1995 (GEP95)*. Most recent history and short-term forecasts were updated in August 1995 for *Global Economic Prospects and the Developing Countries 1995—Short-Term Update* (SecM95-969). Forecasts are subject to future revisions.

[6] For income and regional groupings of economies, see Appendix A.

## Chart 6.  Changes in G-3 Import Demand
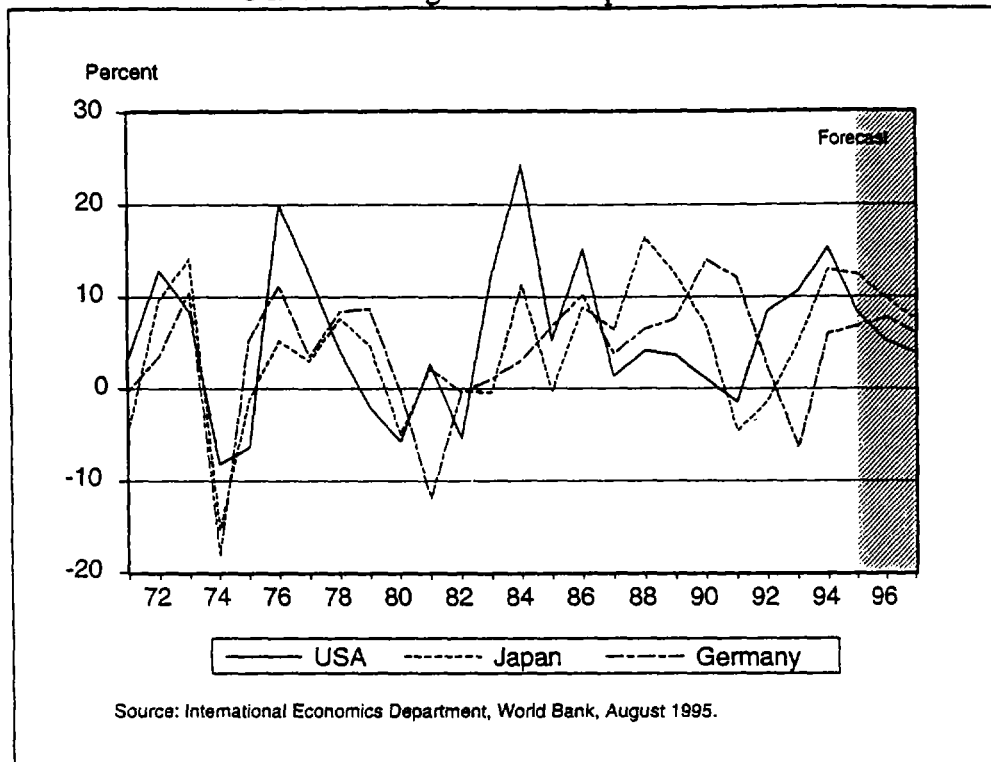
Percent



Source: International Economics Department, World Bank, August 1995.

Desynchronized business cycles were reflected in a more stable pattern of overall OECD import demand (charts 6 and 7), which grew on average by 1.8 percent a year in 1991-93, compared to declines of more than 11 percent in 1975 and 2.7 percent in 1981-82.  Although the contribution of the OECD high-income countries to world import growth fell to about 30 percent in 1991-93 from over 80 percent in 1986-90 (see Chart 8), at least it was not sharply negative, as in the previous two recessions.  Europe provided a floor for trade in 1990-1991, when US and Japanese import growth was falling; then the United States supported world import demand from 1992 onward, and Japan started to contribute vigorously to imports in late 1993.  In the last case, import growth has rebounded even before the recovery of the economy as a result of yen appreciation and an accelerated process of market deregulation.  The desynchronization of business and import cycles in the OECD is likely to continue in the near term, although in a much more attenuated way, with growth expected to gradually slow in the United States in 1995 and 1996 while it moves into higher gear in Europe (Chart 6).  Japan's import demand is projected to expand at a robust rate in spite of its sluggish recovery (Chart 6), due to continuous market opening triggered by appreciation of the yen and heightened consumer awareness.[7]  Nevertheless, with import demand in all three OECD areas expanding together in 1994-96, the OECD high income region's contribution to world import growth is expected to rise to over 60 percent, and this will be an important factor in the projected surge in overall world trade growth to 8.7 percent a year in 1994-96.

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[7]  See Appendix B, "Prospects for Japan's Trade: Market Opening?"

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## Chart 7. Contribution to World Import Growth



**Percent**

Legend:
- ■ World Import Volume Growth
- - - - - Growth Attributed to OECD
- ——— Growth Attributed to LMICX*

\* Low and Middle Income Countries excluding Eastern Europe and Former Soviet Union.

Source: International Economics Department, World Bank, August 1995.
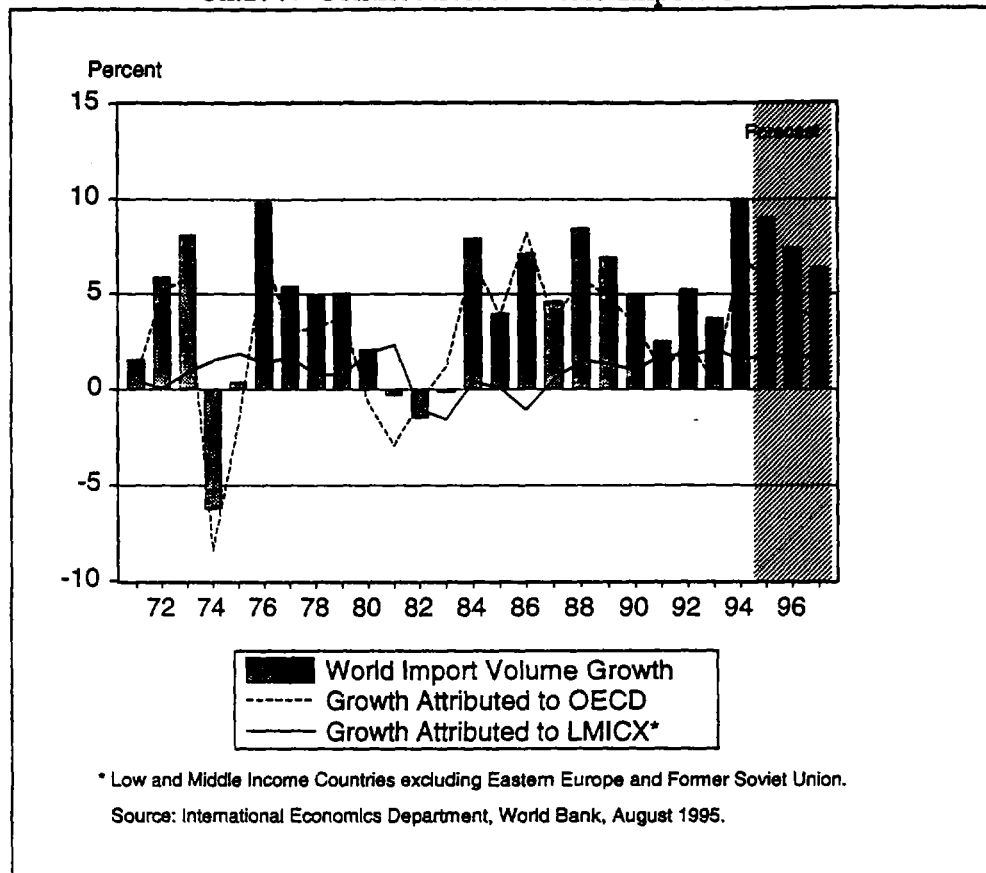
Another factor in the recent dynamism of world trade has been the new role of the developing countries, especially in East Asia and Latin America. In 1991-93, output growth accelerated in these two regions despite a slowdown in the world aggregate. East Asia's output grew by an average of 8.7 percent a year in 1991-93, accelerating from 7.4 percent average growth in the preceding decade. In Latin America, output grew an average of 3.2 percent a year during 1991-93, accelerating from 1.2 percent average growth in the 1980s. In the same period, the rate of import growth in the Low and Middle Income Countries excluding Developing Europe, Central Asia, and the Former Soviet Union (LMICXs) surged to over 10.6 percent a year, from just 2.2 percent in the preceding decade.

Chart 8 shows changing shares in contributions to world import volume growth by income group. The LMIC share of contribution increased from less than 9 percent in 1986-90 to almost 40 percent in 1991-93. Robust trade growth in Hong Kong, Singapore, and Taiwan accounted for most of the surge in import contribution for non-OECD high income countries, which increased from 11 percent in 1986-90 to almost 30 percent in 1991-93. By contrast, OECD's contribution shrank from over 80 percent to 31 percent across the same periods. The Former Soviet Union (FSU) made a negative contribution of more than 14 percent during 1991-93 (2 percent negative contribution

during 1986-90). This means that, on average for 1991-93, 54 percent of the contribution to the growth of world trade volume was generated by the LMICs, excluding FSU, despite their share of less than 20 percent in total world trade in 1991. East Asia's and Latin America's contributions were 29 percent and 17 percent, respectively. Despite the projected OECD recovery, the OECD share of contribution is not expected to reach the high levels observed in earlier business cycle recovery phases, reflecting the projected high pace of LMIC trade integration. In fact, OECD's contribution to incremental world trade growth will be limited to just over 60 percent, and LMICs will continue to claim about a quarter of the growth in world import demand (of which more than half will accrue to East Asia). The increased role of LMICs in trade creation is likely to stay.[8]

Chart 8. Contribution to World Import Growth
(period averages)
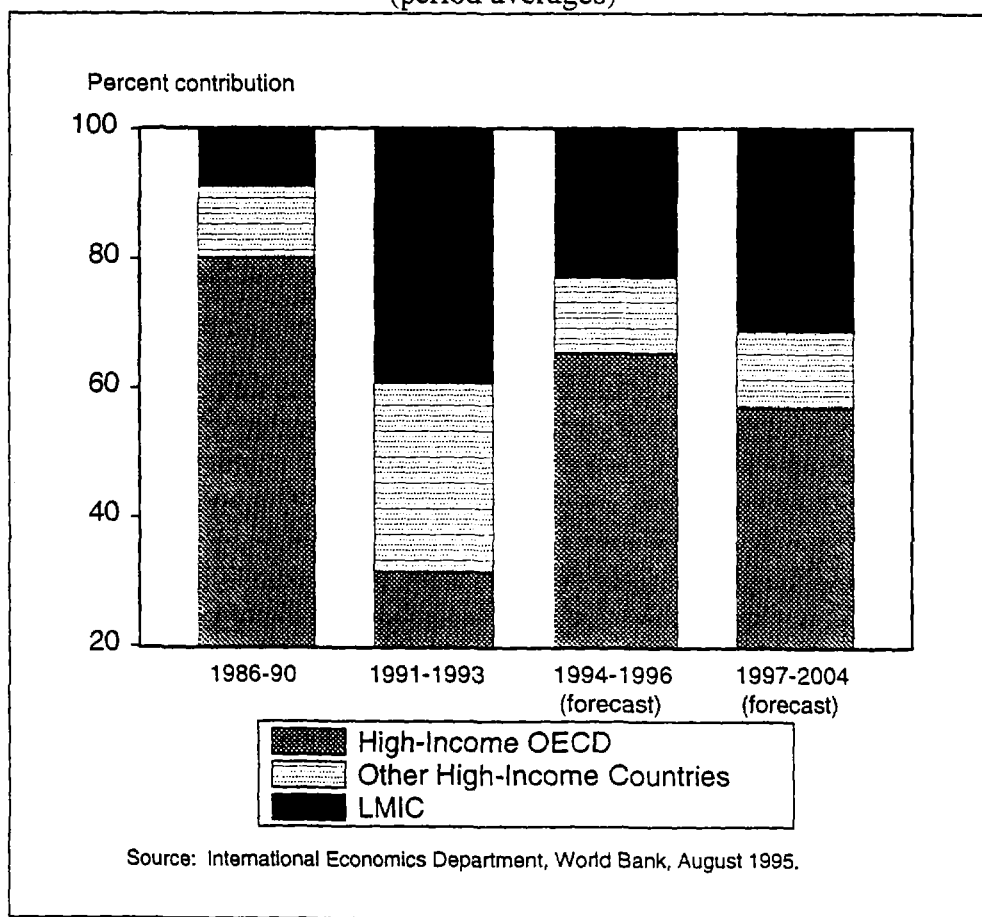


Developing countries continued to grow and import during the last recession, unlike in previous recessions, for at least three reasons. First, buoyed by successful reform and adjustment policies, domestic investment and consumption remained strong. Second, despite the recession in OECD countries, export growth in developing countries actually

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[8] Prospects are discussed in detail in the following sections.

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accelerated, rising, for the LMICX, to nearly 9 percent in 1991-93 from only 3.7 percent in the preceding decade.

The nominal dollar direction of trade statistics compiled in Table 2 shows that developing countries continued to grow exports to industrial countries, comprising 60 percent of their total exports, by 5-6 percent a year; but that intra-developing country exports grew at twice that rate. The share of intra-developing country trade in world trade rose from 10 percent in 1990 to 13.3 percent in 1994. Within intra-LMIC trade, the intra-Asia segment has been growing strongly since the 1970s. Intra-LAC trade, after languishing for decades as a result of inward-oriented policies and the debt crisis, also grew quickly, confirming the success of recent regional trade-opening initiatives such as Mercosur. The table also shows a collapse in intra-developing Europe trade as countries of this region (including FSU) undertook reforms. However, this trade segment has seen over 50 percent growth in nominal terms in 1993, after averaging negative growth of 28 percent a year over the preceding 3 years, as many of the Eastern European economies resumed growth. Further, trade between developing country regions, for example between East Asia and Latin America, also strengthened (see lower panel in Table 2). The emergence of developing countries as an autonomous influence in world trade is illustrated by the fact that exports to developing countries—whether from developing countries or from industrial countries—accounted for a major 3.3 percent of the 5.6 percent increase in world export values in 1991-94 (2.8 percent out of a nominal 3 percent increase in 1991-93).

Finally, there was a surge of private capital flows to developing countries, motivated in part by successful policy reforms and export success. Flows totaled $325 billion during 1991-93 and an estimated additional $173 billion in 1994, and provided, for the recipient countries, much more financing for imports than they were able to use. During the oil price hikes of 1973-74 and 1979-80, purchasing power was transferred to oil exporting countries through changes in terms of trade (and eventually reached other LMIC regions, notably Latin America, in the form of private capital flows). These transfers were translated into higher import demand by direct and indirect recipient regions. A surge in capital flows—targeted to highly absorbent regions such as East Asia and Latin America—has been creating heightened import demand among recipients in a more direct manner, supporting the growth of world trade.

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**Table 2. Growth in Trade Segments & Contribution to World Trade Growth (Direction of Trade)**

| Export of | To | Share in World Trade (% of world total) | | | | | | | Growth of Trade Segments (%) | | | | | Contribution to World Trade Growth (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1970 | 1975 | 1980 | 1985 | 1990 | 1993 | 1994 | 71-75 | 76-80 | 81-85 | 86-90 | 91-94 | 71-75 | 76-80 | 81-85 | 86-90 | 91-94 |
| WORLD | WORLD | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 23.3 | 19.0 | 0.3 | 12.8 | 5.6 | 23.3% | 19.0% | 0.3% | 12.8% | 5.6% |
| OECD | OECD | 58.1 | 49.5 | 46.8 | 49.7 | 55.2 | 48.7 | 47.9 | 19.1 | 17.7 | 1.6 | 15.3 | 2.1 | 11.13 | 8.76 | 0.76 | 8.16 | 0.99 |
| EU | EU | 27.1 | 25.5 | 25.0 | 22.7 | 29.1 | 24.0 | 23.6 | 21.3 | 18.7 | -1.5 | 18.8 | 0.6 | 6.04 | 4.82 | -0.41 | 4.86 | 0.06 |
| OECD | LDC | 19.3 | 23.1 | 20.2 | 17.8 | 16.6 | 19.6 | 19.3 | 27.7 | 15.9 | -2.1 | 11.3 | 9.5 | 5.28 | 3.37 | -0.43 | 1.90 | 1.72 |
| OECD | AFRICA | 3.6 | 3.8 | 3.2 | 2.1 | 1.7 | 1.5 | 1.3 | 24.6 | 15.3 | -7.3 | 7.4 | -0.3 | 0.79 | 0.49 | -0.21 | 0.13 | -0.01 |
| OECD | ASIA | 5.3 | 5.2 | 5.4 | 6.3 | 7.2 | 9.2 | 9.4 | 23.0 | 20.1 | 3.6 | 15.8 | 13.0 | 1.17 | 1.02 | 0.21 | 1.06 | 1.06 |
| OECD | MIDDLE EAST | 2.2 | 5.0 | 4.6 | 3.7 | 2.3 | 2.5 | 2.1 | 45.3 | 16.9 | -3.1 | 2.2 | 4.4 | 1.23 | 0.84 | -0.17 | 0.03 | 0.10 |
| OECD | EUROPE | 3.3 | 4.4 | 3.0 | 2.6 | 2.7 | 2.7 | 2.6 | 30.7 | 10.0 | -2.6 | 14.2 | 5.2 | 1.07 | 0.37 | -0.07 | 0.34 | 0.13 |
| OECD | WESTERN HEMISPHER | 4.8 | 4.6 | 4.1 | 3.1 | 2.8 | 3.7 | 3.8 | 22.7 | 16.3 | -4.2 | 10.9 | 13.7 | 1.00 | 0.65 | -0.19 | 0.32 | 0.44 |
| LDC | OECD | 14.1 | 16.3 | 20.2 | 19.0 | 16.9 | 17.8 | 18.1 | 30.3 | 24.6 | -0.6 | 10.5 | 7.5 | 4.17 | 4.38 | -0.15 | 1.71 | 1.29 |
| AFRICA | OECD | 3.1 | 3.1 | 2.3 | 2.5 | 1.7 | 1.4 | 1.3 | 26.4 | 14.1 | 2.2 | 5.1 | -0.4 | 0.72 | 0.41 | 0.05 | 0.05 | -0.01 |
| ASIA | OECD | 3.3 | 3.9 | 5.3 | 6.7 | 7.6 | 9.3 | 9.5 | 28.2 | 26.9 | 5.2 | 16.1 | 11.5 | 1.06 | 1.26 | 0.31 | 1.18 | 0.97 |
| MIDDLE EAST | OECD | 2.1 | 4.6 | 7.6 | 3.6 | 2.7 | 2.1 | 1.9 | 59.5 | 34.0 | -13.0 | 9.2 | -3.6 | 1.34 | 1.79 | -0.79 | 0.14 | -0.09 |
| EUROPE | OECD | 1.2 | 1.1 | 1.2 | 2.4 | 2.1 | 2.1 | 2.3 | 21.1 | 20.7 | 20.1 | 10.4 | 8.4 | 0.28 | 0.22 | 0.25 | 0.21 | 0.18 |
| WESTERN HEMISPHER | OECD | 4.3 | 3.7 | 3.7 | 3.9 | 2.7 | 2.9 | 3.1 | 22.5 | 19.7 | 1.2 | 5.8 | 9.5 | 0.77 | 0.69 | 0.05 | 0.13 | 0.25 |
| LDC | LDC | 5.0 | 6.8 | 8.9 | 10.3 | 9.9 | 12.4 | 13.3 | 33.4 | 26.3 | 4.4 | 12.5 | 13.8 | 1.71 | 1.89 | 0.31 | 1.17 | 1.55 |
| AFRICA | AFRICA | 0.4 | 0.3 | 0.2 | 0.2 | 0.2 | 0.2 | 0.2 | 15.0 | 12.6 | -0.1 | 13.9 | 8.6 | 0.05 | 0.02 | 0.00 | 0.02 | 0.02 |
| ASIA | ASIA | 1.1 | 1.2 | 2.2 | 3.1 | 4.5 | 6.4 | 7.1 | 25.4 | 34.6 | 7.6 | 22.0 | 18.7 | 0.30 | 0.53 | 0.19 | 0.76 | 1.02 |
| MIDDLE EAST | MIDDLE EAST | 0.2 | 0.3 | 0.5 | 0.4 | 0.4 | 0.3 | 0.2 | 42.2 | 35.5 | -2.9 | 12.2 | -6.2 | 0.08 | 0.11 | -0.02 | 0.04 | -0.02 |
| EUROPE | EUROPE | 1.5 | 1.5 | 1.6 | 2.2 | 1.0 | 0.9 | 1.4 | 22.2 | 21.7 | 8.4 | -4.0 | 20.1 | 0.33 | 0.29 | 0.12 | -0.05 | 0.17 |
| WESTERN HEMISPHER | WESTERN HEMISPHER | 1.0 | 1.1 | 1.2 | 0.7 | 0.7 | 0.9 | 0.9 | 33.8 | 22.3 | -10.4 | 14.2 | 12.5 | 0.26 | 0.23 | -0.11 | 0.08 | 0.10 |

**Asia's South-South Trade**

| Export of | To | Share in World Trade (% of world total) | | | | | | | Growth of Trade Segments (%) | | | | | Contribution to World Trade Growth (%) | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1970 | 1975 | 1980 | 1985 | 1990 | 1993 | 1994 | 71-75 | 76-80 | 81-85 | 86-90 | 91-94 | 71-75 | 76-80 | 81-85 | 86-90 | 91-94 |
| ASIA | LDC | 1.61 | 1.92 | 3.25 | 4.33 | 5.55 | 7.91 | 8.49 | 28.2 | 32.4 | 6.4 | 19.0 | 17.5 | 0.47 | 0.78 | 0.23 | 0.87 | 1.18 |
| ASIA | AFRICA | 0.15 | 0.18 | 0.25 | 0.19 | 0.19 | 0.24 | 0.23 | 28.0 | 28.7 | -4.9 | 15.8 | 11.6 | 0.04 | 0.05 | -0.01 | 0.03 | 0.02 |
| ASIA | ASIA | 1.12 | 1.19 | 2.17 | 3.08 | 4.45 | 6.45 | 7.09 | 25.4 | 34.6 | 7.6 | 22.0 | 18.7 | 0.30 | 0.53 | 0.19 | 0.76 | 1.02 |
| ASIA | MIDDLE EAST | 0.16 | 0.32 | 0.50 | 0.53 | 0.36 | 0.53 | 0.48 | 48.1 | 30.0 | 2.7 | 4.9 | 13.7 | 0.08 | 0.12 | 0.01 | 0.02 | 0.06 |
| ASIA | EUROPE | 0.30 | 0.21 | 0.28 | 0.34 | 0.33 | 0.30 | 0.27 | 14.8 | 27.6 | 4.6 | 13.4 | 1.9 | 0.04 | 0.06 | 0.01 | 0.03 | 0.00 |
| ASIA | WESTERN HEMISPHER | 0.06 | 0.14 | 0.22 | 0.19 | 0.21 | 0.39 | 0.43 | 50.4 | 30.8 | 1.0 | 16.0 | 26.8 | 0.04 | 0.05 | -0.01 | 0.03 | 0.08 |
| Import of | | | | | | | | | | | | | | | | | | |
| LDC | ASIA | 1.74 | 1.92 | 2.59 | 3.65 | 5.03 | 7.58 | 7.75 | 26.0 | 25.8 | 8.1 | 20.1 | 17.5 | 0.47 | 0.56 | 0.23 | 0.82 | 1.08 |
| AFRICA | ASIA | 0.25 | 0.19 | 0.13 | 0.14 | 0.17 | 0.26 | 0.24 | 16.7 | 11.2 | 9.0 | 16.8 | 17.6 | 0.04 | 0.02 | 0.00 | 0.02 | 0.03 |
| ASIA | ASIA | 1.15 | 1.21 | 1.81 | 2.67 | 4.11 | 6.28 | 6.53 | 25.4 | 28.4 | 8.7 | 22.9 | 18.4 | 0.31 | 0.40 | 0.19 | 0.72 | 0.94 |
| MIDDLE EAST | ASIA | 0.16 | 0.31 | 0.41 | 0.41 | 0.33 | 0.47 | 0.46 | 42.6 | 26.0 | 1.4 | 7.6 | 14.9 | 0.08 | 0.10 | 0.00 | 0.03 | 0.06 |
| EUROPE | ASIA | 0.10 | 0.10 | 0.12 | 0.34 | 0.33 | 0.30 | 0.21 | 23.7 | 24.1 | 30.8 | 12.5 | -5.8 | 0.02 | 0.02 | 0.04 | 0.04 | -0.02 |
| WESTERN HEMISPHER | ASIA | 0.08 | 0.11 | 0.12 | 0.09 | 0.10 | 0.28 | 0.31 | 38.8 | 21.4 | 4.3 | 14.1 | 40.5 | 0.03 | 0.02 | 0.00 | 0.01 | 0.07 |

Note : Period average growth rates are computed as simple arithmetic averages.
Source : IMF/Direction of Trade Statistics.

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Chart 9 shows the relative magnitude of changes in terms of trade and long-term capital inflows for LMIC as a whole. On a gross basis (net aggregate resource flow, as shown in Chart 3), capital flows have been a dominant force in the transfer of purchasing power to developing countries, except for the periods of the OPEC oil price hikes. On a net basis (net aggregate transfer), however, dominance did not appear until the early 1990s due to a net resource outflow from the LMICs at the height of the debt crisis (1982-87). In both net and gross terms, the dominance is very pronounced as we observe the effective end of debt crisis and a renewed, much larger surge in capital flows into the LMICs.

Chart 9.  Transfer of Purchasing Power to Developing Countries through
Terms of Trade Changes and Long-Term Capital Flows

US$ billion

----- Net Aggregate Transfer*
—— Terms of Trade Gains**

* Net Aggregate Transfer = Net Aggregate Resource Flow
  - Interest on Long-Term Debt  -  Profit Remittances on FDI
            Source: World Debt Tables 1994-95, World Bank.

**Terms of Trade Gains = (Export Price - Export Price[-1])*Export Volume
                - (Import Price - Import Price[-1])*Import Volume
            Source: International Economics Department, World Bank

Chart 10 shows contributions to world import volume growth by three LMIC regions, Asia, Latin America, and Middle East and North Africa. A surge in import demand in the early 1990s is visible for Asia and Latin America. The movements in import demand in these regions largely correspond to movements in output growth. However, upon closer examination, the chart also reveals movements in import demand

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that are in line with transfer of purchasing power at critical junctures. This should be regarded as the third major reason for sustained import demand in certain LMIC regions.

Chart 10. Contribution to World Import Growth by Major Recipients of Purchasing Power Transfer



Source: International Economics Department, World Bank, August 1995.
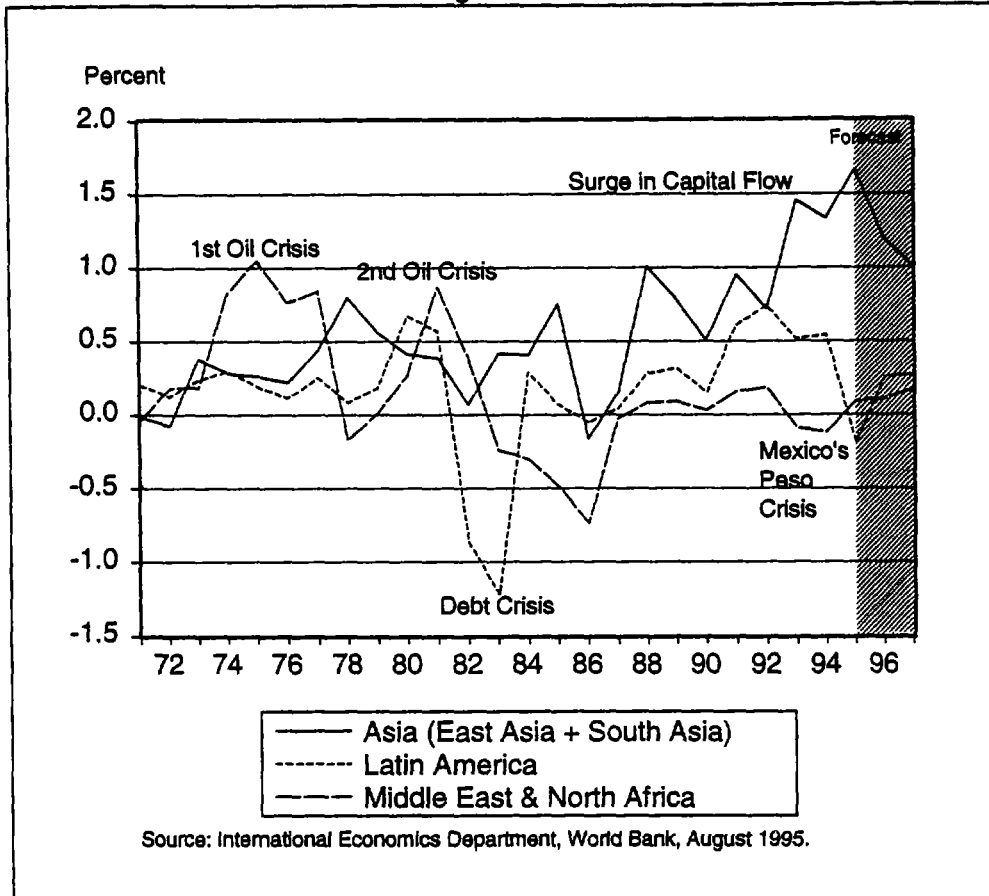
In the case of Middle East and North Africa, abrupt changes in contribution to world import demand, as shown in Chart 10, correspond to fluctuations in oil prices and the resulting transfer of purchasing power in the form of increased (or decreased) oil revenue. In fact, increased demand in oil exporting countries and circulation of oil dollars into Latin America and Asia were the main causes of sustained import demand in LMICX, as shown in Chart 7 for two periods of oil price hikes. Among other reasons for the sustained import demand, purchasing power was transferred away from OECD to these regions.

For Latin America, Chart 10 shows surges in imports in 1974-75 and 1980-81, when oil dollars complemented increasing amounts of private loans to this region. Aggregate net resource flows to Latin America peaked in 1980-81, augmenting the region's import capacity. Oil revenue rose for the region's oil exporting countries (Mexico, Venezuela), but import demand (import capacity) dropped rapidly in the wake of the 1982 debt crisis. In fact, as shown in Chart 11, during the height of the debt crisis in

1982-87, Latin America's contribution to world import demand was negative or barely positive, as net long-term resource outflow (long-term aggregate resource transfer, net of amortization, interest payments, and profit remittances) out of this region continued during this period. Chart 11 shows that a recent surge in Latin American imports again coincided with the resurgence of private capital flow, this time consisting of private equity, which accounted for a third of total net resource flow, and of foreign direct investment, which also comprised a third of total flow, on average, for 1991-93. An average of 87 percent of total net resource flow into Latin America consisted of private flow during this period.[9]

In Asia, a surge in import demand (and import propensity) has been largely sustained by regional trade integration, fueled by intra-regional foreign direct investments, including from Japan. In 1991-93, on average, foreign direct investment accounted for about 45 percent of total capital inflow into East Asia (54 percent of private long-term capital inflow), followed by private loans dominated by banks' export credits guaranteed by official and private export credit institutions. Financial integration in the form of increased private capital flow has been accelerating trade integration and creating increased import demand in this region.

Granger causality tests between reserves positions and nominal import values (goods and services) imply that import capacity tends to be strongly binding in Latin America, South Asia, Sub-Saharan Africa, and Europe and Central Asia (ECA); and mildly binding in Middle East and North Africa. It is not likely to be a binding factor in East Asian import demand (see Table 3). One can easily assert that capacity has been a critical factor in import demand in Europe and Central Asia (ECA) in the past several years (and will continue to be so). The size of net long-term resource inflow is the strong determinant of import demand for the regions with binding import capacities (see ECA in Chart 11). By looking at recent movements in net resource flows to LMIC regions and the contribution of these regions to world trade, and by noting the aforementioned aspects of East Asian capital flows, it becomes obvious that the recent surges in private capital flows into these regions have supported high import demand out of these regions.[10]

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[9] For capital flow and import demand growth before and after Mexico's peso crisis (1994-95 and beyond), see *Global Economic Prospects and the Developing Countries 1995—Short-Term Update*, August 1995, where this author provides analyses and projections.

[10] Studies by Fry confirm some of these points by noting that capital flows to Latin America tended to finance existing current account deficits, whereas those into East Asia often resulted in increased investments. See Maxwell J. Fry, "Foreign direct investment in a macroeconomic framework: finance, efficiency, incentives and distortions," University of Birmingham International Finance Group Working Papers No. 92-17 (1992). Also see Fry, "Foreign direct investment in a macroeconomic framework: some further findings," IFGWP-93-03 (1993).

Table 3. Granger Causality Test, 1970-1994: Is Import Capacity Binding?[a]

| | F-Statistic | Probability |
|---|---|---|
| **Sub-Saharan Africa** | | |
| Imports do not Granger-cause reserve positions | 0.61 | 0.70 |
| Reserve positions do not Granger-cause imports | 3.12 | 0.07[b] |
| | | |
| **East Asia** | | |
| Imports do not Granger-cause reserve positions | 1.35 | 0.33 |
| Reserve positions do not Granger-cause imports | 0.54 | 0.74 |
| | | |
| **South Asia** | | |
| Imports do not Granger-cause reserve positions | 5.28 | 0.02[c] |
| (up to 1992) | 2.41 | 0.14 |
| Reserve positions do not Granger-cause imports | 4.03 | 0.03[c] |
| (up to 1992) | 5.19 | 0.03[c] |
| | | |
| **Europe and Central Asia** | | |
| Imports do not Granger-cause reserve positions | 0.41 | 0.83 |
| Reserve positions do not Granger-cause imports | 2.63 | 0.09[b] |
| | | |
| **Middle East and North Africa** | | |
| Imports do not Granger-cause reserve positions | 2.21 | 0.14 |
| (up to 1992) | 1.44 | 0.32 |
| Reserve positions do not Granger-cause imports | 1.83 | 0.20 |
| (up to 1992) | 2.52 | 0.13 |
| | | |
| **Latin America and the Caribbean** | | |
| Imports do not Granger-cause reserve positions | 1.69 | 0.23 |
| Reserve positions do not Granger-cause imports | 5.41 | 0.01[c] |

Note: Sample period: 1970-1994; number of observations: 20; number of lags used: 5.

a. Granger causality measures precedence and information content, but does not by itself indicate causality in the more common use of the term. Y is said to be Granger-caused by X if X helps in the prediction of Y, or equivalently, if the coefficients on the lagged Xs are statistically significant in the prediction of Y with the presence of lagged Ys in the information set. If F-statistic exceeds a critical level, at least one of the coefficients attached to lagged Xs is probably non-zero, suggesting the existence of Granger causality. Normally, a probability lower than 0.05 is taken as strong evidence of rejection of the hypothesis 'X does not Granger-Cause Y,' suggesting that 'X does Granger-Cause Y.'

b. Null hypothesis of 'X does not Granger-cause Y' is rejected at 10 percent confidence level.

c. Null hypothesis of 'X does not Granger-cause Y' is rejected at 5 percent confidence level.

# Chart 11. Trade Integration and Transfer Purchasing Power



**East Asia**

**Latin America and Caribbean**

**South Asia**

**Middle East and North Africa**

**Europe and Central Asia**

**Sub-Saharan Africa**

- - - - - Trade/GDP Ratio
——— Aggregate Net Transfer/GDP
········ Terms of Trade Changes

18
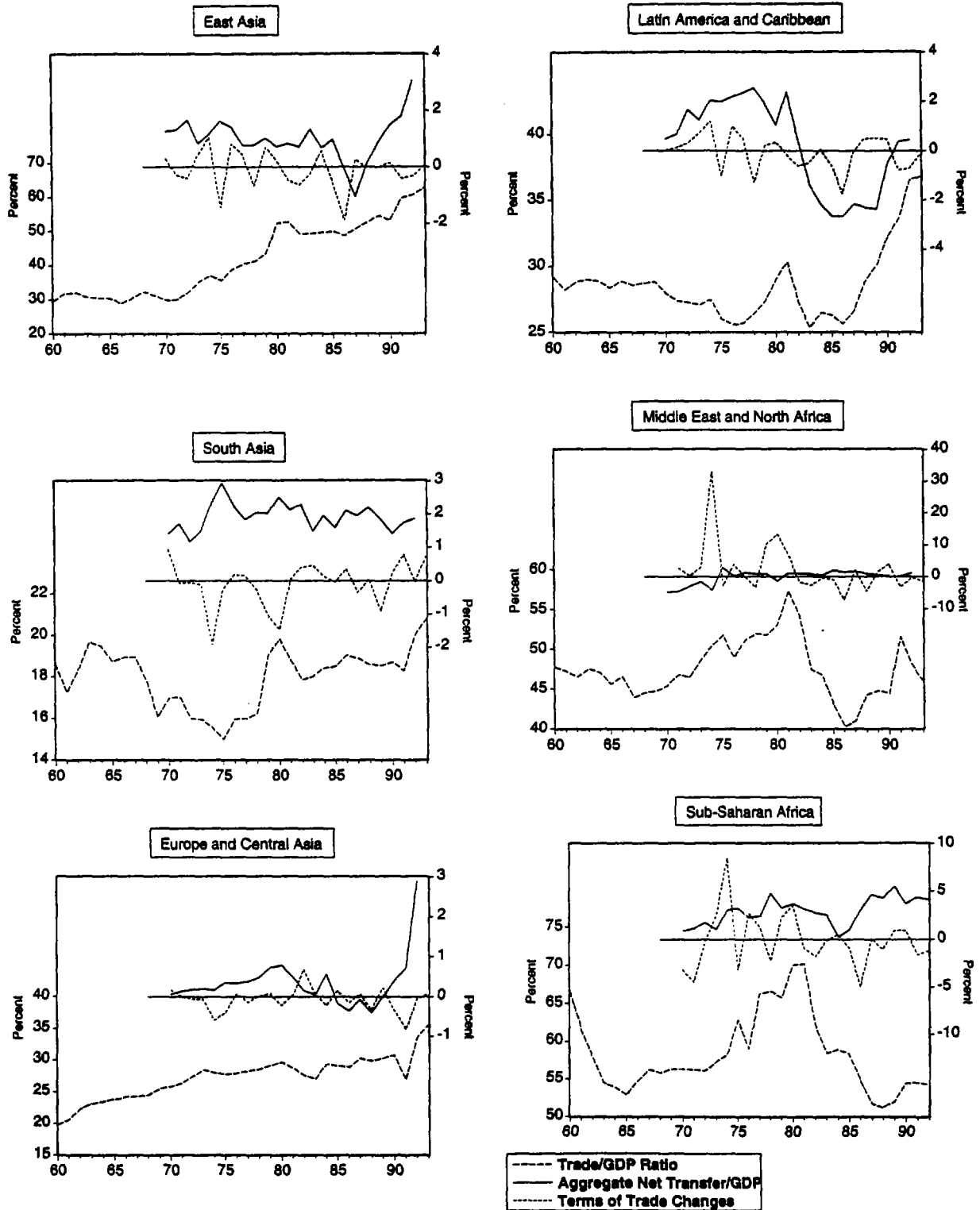
# III. New Waves of Liberalization in the Mid 1980s and the Early 1990s—Trend Acceleration in Speed of Trade Integration?

The 1991 inaugural issue of the World Bank's *Global Economic Prospects and the Developing Countries (GEP91)* stated that:[11]

> All through the period 1950-90, international trade grew faster than output. The rapid growth of world trade in the 1950s and 1960s was due partly to a recovery from the stagnation of the interwar years. It was spurred by buoyant growth in industrial countries, reduced barriers to trade, low world inflation, modest real rates of interest, and expanding real resource transfers to developing countries. But many of these trends were reversed in the 1970s and 1980s. The growth of international trade slowed markedly and the gap with world output growth narrowed... Progressive liberalization of trade policies between 1947 and 1974 helped. Average tariffs in industrial countries fell from about 40 percent to 3 percent... The forces for trade liberalization have weakened since the mid 1970s, when industrial countries began to establish new barriers to trade. By 1986, almost 16 percent of OECD imports were covered by nontariff barriers... The protectionist trend in developing countries has been similar. Analysis of a sample of 82 developing countries in 1987 revealed that 28 percent of all imports were subject to nontariff barriers...

Looking back, however, there was a marked acceleration in world integration through trade again in the mid 1980s, as is highly visible in Chart 12. Measured by a ratio of trade to output, this meant a reversal in the trend in trade integration for OECD, which had been slowed by the macroeconomic instabilities and heightened nontariff barriers in 1970s and early 1980s. For LMIC as a whole, a rising trend in trade integration was a rather new phenomenon. In fact, out of the 16 percent rise in LMICs' trade integration ratio (trade/GDP) in the past three decades or so, a 15 percent surge was observed only after the mid 1980s. A series of reform and liberalization efforts enabled LMIC to vigorously take part in the world market. Emerging LMIC markets, a decline in commodity prices, a surge in foreign investment activities after the Plaza accord, and a series of bilateral and regional trade arrangements such as an expansion of the EU and the US-Canada free trade agreement, put OECD economies back on an accelerated integration path.

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[11] *Global Economic Prospects and the Developing Countries 1991*, p. 9.

## Chart 12. Trade Integration
### Export plus import volumes of merchandise, ratio to GDP

Percent



Percent



Percent
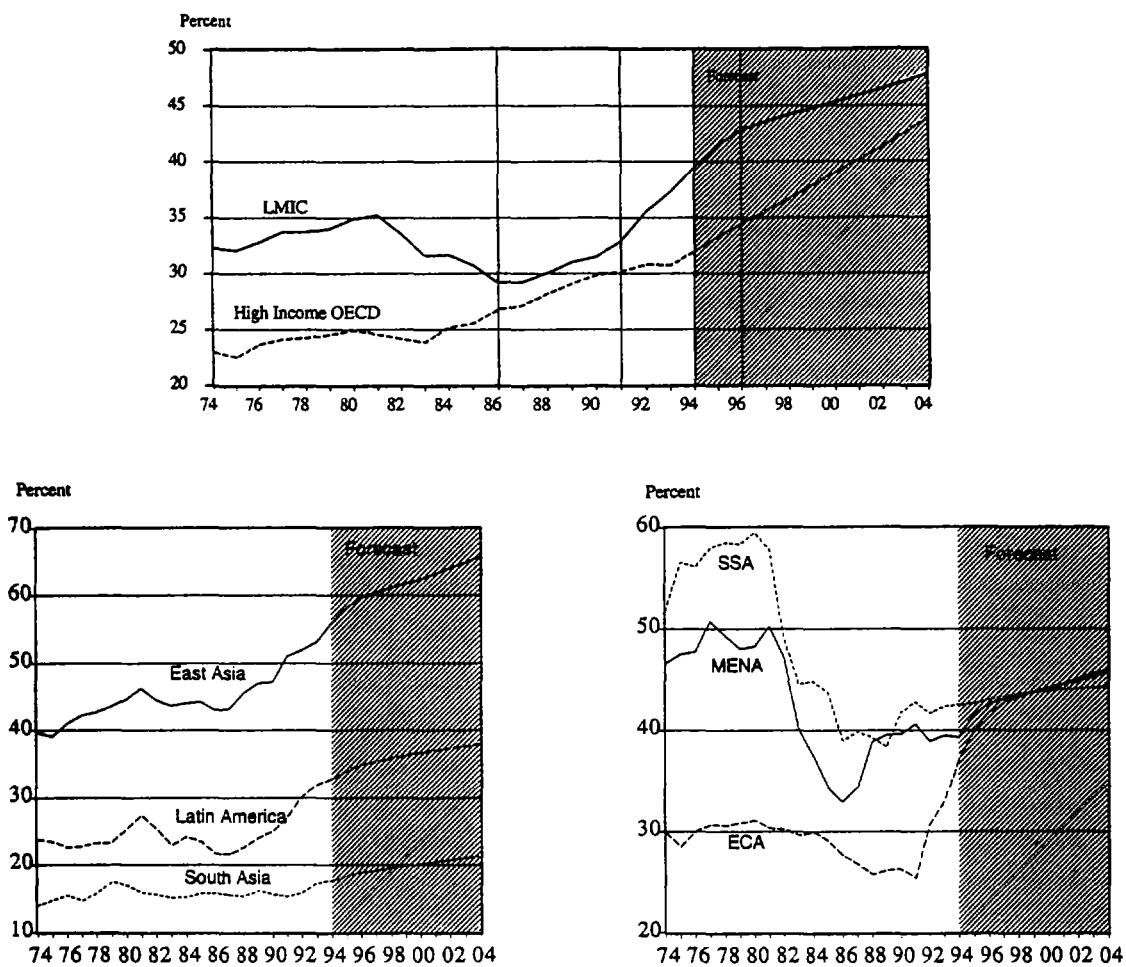


Source: International Economics Department, World Bank, February 1995.

As *GEP91* noted, a surge of protectionism occurred in the 1970s throughout the world. Even in East Asia, the only LMIC region where a surge in trade could be detected in the early 1970s, increasing protection was observed in number of economies, such as Korea and Indonesia.[12] By contrast, the 1980s was the decade of trade liberalization, often with complementary domestic policy reforms and a marked shift toward outward orientation. Particularly from the mid 1980s until the early 1990s, an increasing number of developing economies were liberalizing trade, mostly unilaterally. In Asia, liberalization spread from Taiwan and Korea to Southeast Asia and on to China. In Latin America, it spread from Chile to Mexico and beyond.[13] Chart 12 shows the reversal of falling or stagnant trends in trade/output ratio for LMIC as a whole, and for East Asia and Latin America in particular, corresponding to the liberalization drive.

The index of trade integration, computed as a ratio of exports plus imports to GDP, is one of an array of indicators used to represent trade liberalization or, synonymously, outward orientation. Other aggregate indicators include the effective exchange rate (for exports vs. imports); Dollar index and its variations; ordinal and subjective rankings of liberalization, comprising a group of individual indicators; and Leamer's index.[14] Dean, Desai, and Riedel further categorize outward orientation into a move toward neutrality, liberality, or openness.[15] A move toward neutrality involves equalizing incentives between the exporting and import-competing sectors. Since a majority of developing economies were driven by import substitution until the 1980s, this generally meant a reduction in the anti-export bias. A move toward liberality can be fostered by cutting policy interventions; however, a more neutral regime does not necessarily mean a more liberal one, since neutrality can be achieved by introducing neutralizing intervention, i.e., export subsidies against import barriers. Finally, openness is simply equated with an increase in the share of trade to GDP.

Since different measures tend to concentrate on distinct aspects of liberalization, none can be perfect, nor even compatible with every kind of study or assessment of trade regimes. The trade/GDP ratio is no exception, and has its own share of drawbacks. First, it can conceal various degrees of distortion, and therefore the same trade/output share can coexist with a range of neutrality and liberality. Second, this share of trade to output has a relatively strong association with the size of the economy. For instance, measured in real terms, the US economy showed an average merchandise trade/GDP ratio of 18 percent for 1991-93, while China's ratio averaged over 30 percent for the same period. Is the Chinese economy more open than the US economy? The answer is definitely not. The US

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[12] See, for example, Amar Bhattacharya and Johannes F. Linn, "Trade and Industrial Policies in the Developing Countries of East Asia," World Bank Discussion Paper No. 27, 1988.

[13] Judith M. Dean, Seema Desai, and James Riedel, "Trade Policy Reform in Developing Countries since 1985: A Review of the Evidence," World Bank Discussion Paper No. 267, 1994, p. 1.
For the design and sequencing of trade reform, and for documented reform efforts up to the mid 1980s, see Vinod Thomas, J. Nash and Associates, *Best Practices in Trade Policy Reform*, Oxford University Press, 1991; and Michael Michaely, Armeane M. Choksi, and Demetris Papageorgiou, *Liberalizing Foreign Trade: Lessons of Experience in the Developing World*, Basil Blackwell, 1991.

[14] For brief description of these indices and references, see Dean, Desai, and Riedel, Sec. II.

[15] Ibid., p. 3.

economy is 11 times larger than China's,[16] and cross-country comparison shows a strong negative correlation between trade/GDP ratio and the size of an economy.

Some argue against using the trade/output ratio to measure global integration for economies with accumulated FDI stock abroad. Critics assert that a reduction of exports of the affected industry at the source country, and the resulting decline in export/GDP ratio, should not be seen as a decay in globalization. As defined at the outset of the paper, globalization is a process of integrating production, distribution, and usage of goods and services among the economies of the world, which shifts the stock of productive capacity across the national boundaries, notably in the form of accumulated FDI. The share of trade/GDP tends to increase in both supplier and recipient countries as inter-industry trade increases in the earlier stages of this process. At a later stage, in the move toward overseas production (even with a rise in accommodating imports in the affected product category), the trade/GDP share of the original capital sourcing country declines as domestic content of products increases. Components are supplied increasingly in the FDI destination, or even by cost-competitive third party economies, and spot marketing or marketing in a group of third party economies increases (this might be high from the outset for overseas production). However, for affected countries as a group, or at a world aggregate level, this accumulation of FDI stock almost surely increases trade/output ratio.[17]

Harrison examined correlations between seven proxies, including the aforementioned aggregate measures of trade/GDP share, and individual measures such as the black market exchange rate premium.[18] Although she found that correlations across openness (by her definition) measures were sometimes weak, trade/GDP share was positively correlated with ordinal and subjective ranking measures of trade reform, and negatively correlated with measures of price distortions, including black market premiums, where higher numbers mean an inappropriately high official exchange rate. The results confirm that although the trade/output ratio contains its own share of drawbacks, it can, with suitable size adjustments, be a simple, comprehensive, and stable measure of the openness used in time series observations or in cross-country observations.[19] Speed of

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[16]     Even if the size of the domestic market is compared using purchasing power parity (PPP) conversion factors, the US economy was at least three times larger than China's in 1992. This implies an enlargement of the denominator in the trade/output ratio. South Korea's trade/output ratio was 67 percent on average for 1991-93. Malaysia's ratio was 141 percent. Are these economies more open than the US economy? As economies develop, the share of the nontradable service sector in total output tends to increase. This is one major cause of the negative correlation.

[17]     One can always argue the difference of globalizing and globalized; that is; globalization defined as a *process* of integration. Trade activities often increase between source and destination economies in the ongoing process of FDI. For observed cases of FDI-trade interaction, see, for example, Kenji Takeuchi, "Does Japanese Direct Foreign Investment Promote Japanese Imports from Developing Countries?" World Bank Policy Research Working Paper No. 458, 1990.

[18]     Ann Harrison, "Openness and Growth," World Bank Policy Research Working Paper No. 809, 1991.

[19]     For instance, Syrquin and Chenery used the deviation of actual from predicted trade flows, with predictions based on variables such as country size. See Moshe Syrquin and Hollis Chenery, "Three Decades of Industrialization," in *The World Bank Economic Review*, Vol. 3. No. 2, 1989.

trade integration, as the first order approximation of the rate of change in trade/GDP ratio, therefore represents the pace of opening, or, in a general sense, of liberalization.[20]

Table 4 shows the wave of unilateral liberalization that emerged from the mid 1980s to the early 1990s in developing regions, and the resulting upward kinks in the trends in trade/GDP ratios for the majority of countries and regions that enacted liberalization measures (shown in the last column).[21] With a few exceptions where business cycle elements and/or specific political incidents overshadowed the reform efforts (e.g., China), trend acceleration—or a reversal, in the case of a falling trend—in the trade/output ratio was attained as a result of liberalization measures. As shown in Chart 12, this dramatic turnaround in the reforming countries seems to have created a marked evolution in their degree of involvement in the mid 1980s.

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A sample ranking of countries by openness is shown in Appendix C, where PPP evaluations of output size and the second round of size adjustment are presented.

[20] Trade/output ratio has variables that tend to grow geometrically in both numerator and denominator. As a result, this ratio tends to have a linear (not log-linear) trend, with kinks. In the cross-country/cross-region comparison, if the slope of the trend line is similar, one that starts with a higher trade/output ratio has a slower speed of integration. This is an important technical fact in understanding regional differences in the speed of integration (see forecast portions of Chart 12 and Table 5).

[21] For a further quantitative and qualitative evaluation of these liberalization efforts, see Shigeru Otsubo, "Determinants of Trade Integration: Structural Integrators vs. Contingent Integrators?" Mimeo, International Economics Department, World Bank, 1995.

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## Table 4. Representative Trade Reforms in Developing Countries since the Mid 1980s

| Region/Country | Year Began Major Reform | Year of Major Reform | Average Tariff Rates (%) | | Quantitative Restrictions | | Black Market Premium[a] | | Real Effective Exchange Rate[c] | | Trend in Imports/GDP ratio[d] | | Trend in Exports/GDP ratio[d] | | Trend in Trade/GDP ratio[d] | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Pre-reform | Post-reform | Pre-reform | Post-reform | Pre-reform[b] | Post-reform[b] | 1st year of major reform | Up to 1992 | Pre-reform | Post-reform | Pre-reform | Post-reform | Pre-reform | Post-reform |
| **South Asia** | | | | | | | | | | | | | | | | |
| Bangladesh | 1985 | 1991 | 94.0 ('89) | 50.0 ('93) | 39.5 ('89) | 10.0 ('93) | 113.0 | 112.8 | -5.3 | -5.3 | 5.1 | 2.3 | 3.3 | 12.2 | 4.6 | 5.7 |
| India | 1988 | 1991 | 128.0 ('90) | 71.0 ('93) | 93.0('90) | <50.0 ('93) | 12.4 | 23.8 | -7.7 | -7.7 | 0.5 | 6.7 | -1.1 | 6.9 | -0.1 | 6.8 |
| Pakistan | 1987 | 1987 | 68.9 ('87) | 64.8 ('90) | 63.0 ('80) | 32.7 ('86) | 19.6 | 7.7 | -2.3 | -11.7 | -3.7 | -0.7 | -1.0 | 4.7 | -2.8 | 1.6 |
| Sri Lanka | 1987 | 1987 | 31.0 ('85) | 25.0 ('92) | a few ('85) | 0.0 ('92) | 15.2 | 18.9 | -2.0 | -0.5 | -1.9 | 1.5 | -0.9 | 2.9 | -1.5 | 2.1 |
| **East Asia** | | | | | | | | | | | | | | | | |
| China | 1984 | 1984 | 38.1 ('86) | 43.0 ('92) | | 70.0 ('92) | 20.0 | 88.0 | -11.3 | -43.9 | 1.3 | -2.4 | 1.0 | 1.7 | 1.2 | -0.7 |
| Indonesia | 1985 | 1986 | 27.0 ('85) | 22.0 ('90) | 32.0 ('85) | 10.0 ('90) | 7.6 | 8.9 | -18.4 | -23.2 | -3.3 | 1.3 | -5.6 | 4.2 | -4.6 | 2.9 |
| Korea | 1984 | 1987 | 24.0 ('84) | 10.1 ('92) | 23.0 ('84) | <5.0 ('92) | 4.1 | 3.0 | 8.8 | 13.1 | -3.9 | 3.7 | -2.1 | 2.1 | -3.0 | 2.9 |
| Malaysia | 1986 | 1991 | | 14.0 ('93) | <5.0 ('85) | <5.0 ('92) | 0.9 | 0.0 | 4.6 | 4.6 | -2.2 | 11.5 | 2.3 | 7.3 | 0.2 | 9.1 |
| Philippines | 1985 | 1986 | 27.6 ('85) | 24.3 ('92) | 100.0 ('83) | <5.0 ('92) | 11.0 | 4.6 | -6.1 | 1.8 | -2.9 | 12.1 | 1.0 | 6.8 | -1.2 | 9.7 |
| Thailand | 1982 | 1989 | 13.0 ('86) | 11.4 ('90) | <5.0 ('85) | <5.0 ('88) | -0.9 | 1.2 | 0.6 | -0.5 | -2.3 | 8.6 | 2.8 | 7.2 | -0.1 | 7.9 |
| **Latin America** | | | | | | | | | | | | | | | | |
| Argentina | 1987 | 1989 | 29.4 ('88) | 12.2 ('92) | 88.0 ('88) | a few ('92) | 39.7 | 21.2 | 16.3 | 43.7 | -1.7 | 25.1 | 0.0 | 0.5 | -0.6 | 10.0 |
| Brazil | 1986 | 1987/88 | 51.0 ('87) | 21.0 ('92) | 39.0 ('87) | minimal ('92) | 43.8 | 51.7 | 5.4 | 9.5 | -6.4 | 9.3 | 3.8 | 3.9 | -1.5 | 6.1 |
| Chile | 1985 | 1985 | 35.0 ('84) | 11.0 ('91) | minimal ('84) | 0.0 ('91) | 16.3 | 16.1 | -11.0 | -14.5 | -0.2 | 3.2 | 0.6 | -0.8 | 0.3 | 1.2 |
| Colombia | 1985 | 1985 | 61.0 ('84) | 12.0 ('92) | 99.0 ('84) | 1.0 ('92) | 8.6 | 12.9 | -23.9 | -36.1 | 0.3 | 9.8 | 2.2 | 8.7 | 1.1 | 9.2 |
| Mexico | 1985 | 1985 | 29.0 ('85) | 10.0 ('87) | 92.2 ('85) | 19.9 ('90) | 14.5 | 10.3 | -26.2 | 3.7 | 6.1 | 13.0 | 11.4 | 4.9 | 8.6 | 8.8 |
| Peru | 1989 | 1989 | 57.0 ('88) | 17.0 ('92) | 100.0 ('88) | 0.0 ('92) | 82.4 | 11.5 | 54.1 | 106.7 | -6.9 | 11.1 | -8.4 | 4.7 | -7.6 | 7.6 |
| Venezuela | 1989 | 1989 | 37.0 ('89) | 19.0 ('91) | 40.0 ('89) | 10.0 ('91) | 103.0 | 5.2 | -5.2 | 0.2 | 0.8 | 2.2 | -3.5 | 6.2 | -1.5 | 4.7 |
| **Sub-Saharan Africa** | | | | | | | | | | | | | | | | |
| Ghana | 1986 | 1986 | 30.0 ('83) | 17.0 ('91) | all (?) | 2.0 (?) | 984.6 | 16.5 | -7.0 | -11.1 | -4.5 | 5.9 | -3.7 | -0.3 | -4.1 | 2.9 |
| Kenya | 1988 | 1988 | 40.0 ('87) | 34.0 ('91) | 71.0('87) | 0.2 ('91) | 16.3 | 8.8 | -1.3 | -5.4 | -1.4 | -6.0 | -2.0 | -0.6 | -1.6 | -3.9 |
| Madagascar | 1987 | 1987 | 46.0 ('88) | 36.0 ('90) | all ('86) | 0.0 ('90) | 37.4 | 13.0 | -7.7 | -11.2 | -5.9 | -2.2 | 2.7 | 3.1 | -1.7 | 0.1 |
| Malawi | 1988 | 1988 | 25.5 ('86) | | all ('86) | few ('91) | 50.7 | 12.1 | 5.2 | 4.5 | 3.7 | -1.7 | -1.7 | -2.7 | 0.6 | -2.3 |
| Nigeria | 1986 | 1986 | 35.0 ('84) | 32.7 ('90) | all ('84) | 17.0 ('88) | 209.7 | 27.4 | -62.3 | -71.2 | -19.5 | 2.9 | -9.2 | 1.2 | -13.7 | 1.8 |
| Tanzania | 1984 | 1984 | 30.0 ('86) | 33.0 ('92) | nearly all (?) | 100.0 ('92) | 241.8 | 118.7 | 28.8 | -145.2 | -3.3 | -2.2 | -6.2 | -1.3 | -4.3 | -1.9 |
| Zaire | 1983 | 1986 | 23.8 ('84) | 24.7 ('90) | 100.0 ('84) | 100.0 ('90) | 71.1 | 9.4 | -5.6 | -13.1 | -5.0 | -2.4 | -2.2 | -0.2 | -3.5 | -1.2 |

a. The exchange rate premium is calculated as ((black market rate - official rate) / official rate) * 100.
b. Before and after the year of major reform.
c. Rate of change. A negative sign indicates depreciation.
d. Post-reform : average rate of change from year of reform to 1994 (1993 for Sub-Saharan Africa).
   Pre-reform : average rate of change for the equivalent timespan before reform.
Source: J.M. Dean, Seema Desai, and James Riedel, "Trade Policy Reform in Developing Countries since 1985: A Review of the Evidence," various tables.
   International Monetary Fund, *Issues and Developments in International Trade Policy*, 1992. Tables 11 and 12.
   Author's own compilation from the World Bank DEC Analytical Database.

Table 5. World Trade Growth, Output Growth, and Speed of Integration

| | 1961-70 | 1971-85 | 1986-90 | 1991-93 | 1994-96 |
|---|---|---|---|---|---|
| World Trade Growth[b] | 7.7 | 3.7 | 6.1 | 4.1 | 8.7 |
| World Output Growth | 5.2 | 3.2 | 3.3 | 1.1 | 2.9 |
| Speed of Integration | 2.6 | 0.6 | 2.8 | 3.0 | 5.8 |
| High-Income OECD | 3.3 | 0.7 | 3.2 | 1.1 | 5.4 |
| United States | 3.1 | 1.9 | 4.0 | 4.2 | 6.9 |
| Japan | 4.6 | 1.5 | 0.9 | -1.7 | 4.7 |
| EU12 | 3.6 | 0.6 | 3.7 | 0.7 | 4.8 |
| LMIC | 0.3 | -0.6 | 0.7 | 6.4 | 5.6 |
| Sub-Saharan Africa | -0.9 | -1.5 | -0.7 | 0.7 | 0.7 |
| East Asia | -0.5 | 1.3 | 1.4 | 5.7 | 6.1 |
| South Asia | -0.8 | -0.4 | -0.4 | 4.4 | 4.4 |
| ECA | 3.0 | 0.0 | -1.9 | 6.2 | 9.7 |
| Europe | 3.8 | 0.4 | 0.8 | 5.8 | 5.2 |
| FSU | 1.7 | -0.2 | -5.0 | -0.9 | 13.6 |
| MENA | -0.5 | -1.5 | 3.1 | 1.2 | 0.0 |
| Latin America | -0.4 | -1.6 | 1.9 | 9.5 | 2.6 |
| LMICX | -0.4 | -0.7 | 1.9 | 5.4 | 4.2 |

a. Estimates and Forecast.
b. Growth rate of export plus import volumes of merchandise except for 1961-70. For 1961-70, national accounts data for trade in goods and services are used.
c. Speed of integration = growth rate of world trade - growth rate of world output.

What happened in the early 1990s, often characterized as trade-output decoupling, was an enormous acceleration in the speed of LMIC trade integration into the world market, which compensated for a deceleration in trade integration among OECD, where integration is highly pro-cyclical. Table 5 shows that between two adjacent periods of smooth world output expansion (1986-90) and OECD recession (1991-93), world aggregate speed of trade integration was in fact kept, on average, at a constant level. However, the movements in different income groups were startlingly dissimilar. LMICs have seen tremendous acceleration in the speed of trade integration, from a slow pace of 0.7 percent a year to a galloping 6.4 percent a year, while OECD's pace of integration decelerated from over 3 percent a year to 1.1 percent a year in the latter half of the 1980s.

Supported by a strong recovery in Europe, accelerated market opening in Japan,[22] and continued robust demand in the United States and developing countries, world trade should continue to grow at a robust rate of 8-9 percent for 1994-96. LMIC's speed of trade integration will continue to be strong in the near term. The only noticeable slowdown in the pace of trade integration should be observed in LAC, where countries are forced to grapple with a problem of mounting current account deficit as a result of strong import growth during 1991-93, financed largely by a surge in capital inflow. The unstable nature of unbalanced trade integration, which accumulates the mounting and unsustainable level of current account deficit, was manifested in the recent Mexican peso crisis.

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[22]     See Appendix C for details.

In the longer run (after 1997), the world's speed of integration will eventually slow, after evolving through a business cycle. Trade dependency indicators are fairly pro-cyclical variables. However, the speed of integration should stay at around the level observed after the mid 1980s (2.8 percent), which will be conducive to a continued robust world trade growth of over 6 percent a year, on average, for the next 5-10 years. The underlying forces will be the emergence of the growth poles in LMIC, sustained capital flow and resulting financial integration, market openings (both autonomous and GATT related), and the ongoing structural adjustments that will continue to desynchronize OECD business cycles in the medium term. The direction of trade statistics in Table 2 also imply prospects for robust growth in intra-regional trade in East Asia and Latin America; for a surge in East Asia-Latin America trade; for Eastern Europe and FSU reentering the world markets, which should particularly benefit trade between OECD Europe and Eastern Europe and FSU; and for stronger pulls on OECD countries from these LMIC regions in general.[23]  In the medium to long term, trade between OECD and LMIC (in both directions) and trade among LMICs will continue to be substantial driving forces in world trade, despite the projected recovery in intra-OECD trade. The liberalization drive, which has put some LMIC countries on an faster trade integration path and a faster output growth path since the mid 1980s, could fortify its virtuous cycle if supported by compatible and complementary reforms in domestic markets.

Chart 12 shows the likely developments in trade/output ratios.[24]  A successful completion of GATT Uruguay Round sets the underlying pace of integration throughout the world in the coming decade. Since the gains from the Round should be felt most strongly in EU, the United States, and Japan, where distortions have been high and more concentrated, a high pace of trade integration is projected for OECD. The US economy, situated at a crossroads of new outward-oriented North-South trade and investment arrangements (NAFTA and APEC), should keep a relatively high speed of integration by its historical standard. Although the speed of trade integration slows as the trade/output ratio increases for the technical reason explained above,[25] the ratio should increase from less than 18 percent in 1991-93 to over 25 percent during the next decade.

Japan, after more than two decades of a stagnant trade/GDP ratio, should accelerate its integration in the coming decade. Japan had a high pace of trade integration from the end of World War II until the first oil crisis in the early 1970s (SOI of 4.6 for the 1960s). Contrary to the high speed of integration in the early years, which was attained largely by the drive toward exports, the projected acceleration of Japan's speed of integration will be brought about by its market opening, or drive toward imports. Accelerated market deregulation and heightened consumer awareness of the lower cost of

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[23]  For historical trend and prospects in South-South trade and trade regionalization, see Shigeru Otsubo and Tetsuo Umemura, "Regionalization and South-South Trade: could it be an entry point for the South toward global integration?" Policy Research Working Paper (forthcoming), World Bank, 1996.

[24]  Global forecasts are created using BANK-GEM. Long-term forecasts are from February 1995, and are subjective to future revisions.

[25]  See footnote 20.

imports will support this import expansion.[26]  Furthermore, as Japan's supply of long-term capital, in the form of FDI, revives with the end of current prolonged recession, inter-industry trade associated with a shift toward overseas production (in Asia in particular) will increase dramatically in both directions in the coming decade.  The drive for this is expected to come, this time, from medium and small enterprises, in addition to the large ones.

The trade/GDP ratio of the original EU12 economies is at around 50 percent in 1995.  EU's degree of trade integration over the long term should stay at a high level.  Expansion of EU and the deepening of the Common Market will be the underlying factor.

Although the increased presence of LMIC regions in world trade will be indisputable, prospects for trade integration differ by region and between successful integrators and unsuccessful ones.  East Asia's measured pace of trade integration will decline as trade/output ratio increases from the level observed in the first half of 1990.  This will happen for two reasons.  First, a boom in demand for East Asian exports will eventually come to an end as growth in North American and Japanese import demand decreases with business cycle movements and as import penetration increases to a saturation level.  Second, after several years of rapid expansion in exports and domestic demand, the medium-term supply capacity of these economies will become more and more of a binding factor.  However, measured in trade/output ratio, this represents a continuation of a long-term trend, supported by further liberalization initiatives.  Eastern Europe's imports should grow strongly in the near term, supported by a surge in capital inflow.  EU's recovery should bring real positive results in Eastern Europe's export growth through the Association Agreements.  Further trade integration with EU through the Association Agreements, and strengthened foreign direct investments (as in Japan-East Asia), are major underlying factors for the relatively high speed of integration for the next decade.  Latin America's pace of  trade integration into the world market will be forced to slow further as its import growth needs to be more in line with export growth for successful and stable integration over the longer term.  Provided that the region's economies follow prudent macroeconomic management to secure new capital inflow, however, Latin America is expected to preserve a relatively high pace of integration.  The positive effects of the new reform initiatives will show up in efficiency gains that augment export competitiveness, and the region's outward-oriented South-South and North-South Regional Trade Arrangements (RTAs) will add to the integration process.

LMIC's long-run speed of integration for the next decade, although slower than the pace produced by the desynchronized business cycles of OECD and LMIC in the early 1990s, should represent a marked acceleration from the pace experienced in 1980s after the wave of trade liberalization (0.7 percent in 1986-90).  If compared to the pace before the mid 1980s (SOI of 0.3 percent for 1961-70, and negative 0.6 percent during 1971-85), the acceleration in the pace of trade interdependence seems even more remarkable.  Compared to historical performance, the action lies in LMIC, and this will continue in the coming decade.

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[26]     See Appendix C for details.

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## IV. Balanced vs. Unbalanced Integration

Table 4 shows preconditions, liberalization, and end results of trade reforms for 24 major reformers from the mid 1980s to the early 1990s.[27] Trade liberalization during this period encompassed not only a reduction in the anti-export bias of the trade regime and an increased reliance on price mechanisms, but also a reduced level of intervention.

After evaluating reform episodes up to the mid 1980s, Thomas and Nash, and Michaely, Papageorgiou, and Choksi argued that macroeconomic stability and restraint of inflation have been critical factors in the success of trade reform.[28] Their studies also suggested that countries that have been most successful in implementing reform have first transformed quantitative restrictions (QRs) into tariffs, and then gradually lowered these tariffs and made them uniform. Further, they suggested that direct incentives to exports have not been as important to export growth as real devaluation and import liberalization, and at the same time, that exporters' access to imported inputs has been more important for export growth than have general export subsidies. There is also general consensus that the success of trade reform will be limited if it is not accompanied by removal of domestic distortions. The importance of sustained real devaluation for the success of reform for countries with overvalued currencies has been repeatedly stressed in many studies. Removal of import restrictions under foreign exchange shortage due to overvalued rates and tight exchange controls is ineffective. Bearing these arguments in mind, Table 4 shows changes in average tariff rates, quantitative restrictions, the average black market premium,[29] and real effective exchange rates before and after the reform. Trade integration (openness) indices, both aggregate and by exports and imports, measure the end results of the reform. Regional charts (charts 13-15) in the following sections demonstrate the existence of anti-export bias (by the movements in real effective exchange rates) and balance of the trade reforms (in relative movements in export and import integration before and after the major reform initiatives).[30]

In the mid 1980s, all four South Asian countries still protected their import-competing sectors with very high tariffs. Between 1985 and 1990, with the exception of Sri Lanka, the pattern of reform in this region was one of moving toward a more neutral

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[27] This table is based, among other sources, on various tables in Dean, Desai, and Riedel, "Trade Policy Reform in Developing Countries since 1985: A Review of the Evidence." General descriptions of reforms for each region in this section also owe a great deal to this review.

[28] Vinod Thomas, J. Nash and Associates, *Best Practices in Trade Policy Reform*; and Michael Michaely, Armeane M. Choksi, and Demetris Papageorgiou, *Liberalizing Foreign Trade: Lessons of Experience in the Developing World*, 1991.

[29] As a measure of price distortions and foreign exchange controls, a larger black market foreign exchange premium means a higher degree of anti-export bias.

[30] Charts 13-16 show the balance between export and import integration by presenting trend rates of changes in export/GDP ratio and import/GDP ratio before and after the year of major reform (see Table 4). If the economy is skewed in the direction of import integration—often associated with appreciation in real effective exchange rate—it tends to have balance of payment difficulties (e.g., Mexico).

trading regime. Sri Lanka, having been essentially free of QRs before the mid 1980s, moved towards liberality by reducing tariffs and export disincentives at the same time. Since 1991, India and Bangladesh have moved toward liberality with radical reforms in foreign exchange markets. Average tariff rates, although still high compared to those of

Chart 13

Trade Integration Before and After the Trade Policy Reform of the 1980s
(South Asia)



Real Effective Exchange Rate
(1980=100)
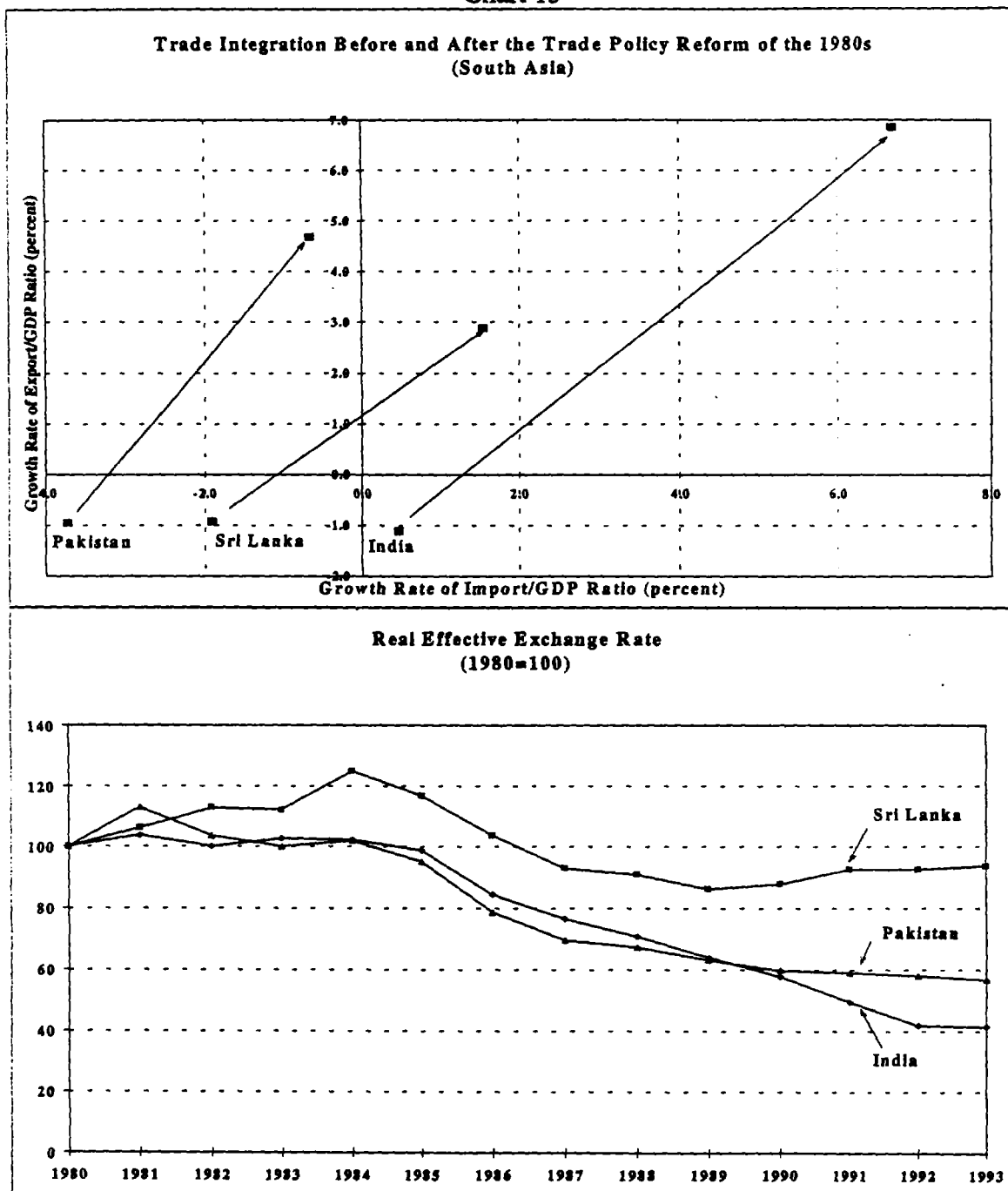


other regions, were reduced an average of 30 percent. QRs were reduced, on average, to less than half of the pre-reform levels. Although price distortions and foreign exchange

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shortages, measured in black market premia, did not improve much—which has limited the effects of import liberalization—the economies of South Asia succeeded in attaining a sustained real depreciation. The reforms in this region, although generally modest, as portrayed in Chart 13, have resulted in a balanced acceleration in trade integration (openness) as the trend acceleration has been brought out by both exports and imports.
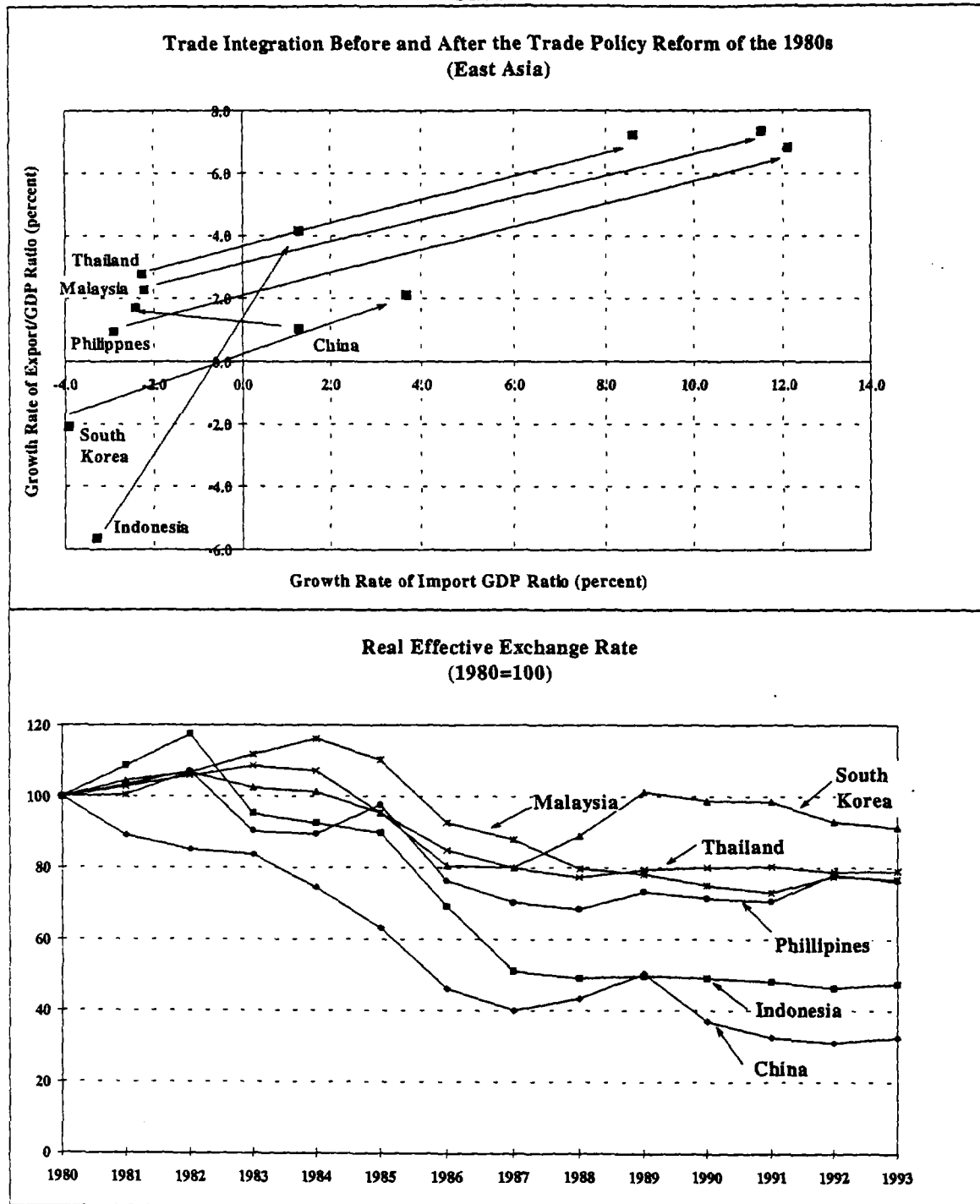
Most of the East Asian economies had already undertaken trade liberalization initiatives by the mid 1980s. Korea and Malaysia had removed most quantitative restrictions and were in the middle of more comprehensive trade reform. China's Open Door policy, initiated in 1978, started to produce higher export and output growth by the late 1980s. As Dean, Desai, and Riedel have noted, the first phase of trade policy reform in East Asia was removing obstacles to exporting, which typically involved unifying and devaluing the exchange rate and eliminating quantitative restrictions on imports of intermediate and capital goods. The second phase, in which tariffs began to be gradually reduced, generally commenced only after the balance of payments was strengthened.[31]

Chart 14 shows the patterns of trade integration observed in East Asia since the mid 1980s. China has been promoting exports while maintaining tight control on imports, through both high rate of tariffs and extensive use of quantitative restrictions, and did not embark on the second phase of trade policy reforms until the early 1990s. China, Indonesia, and the Philippines initiated reform with substantial real depreciation, but only China and Indonesia sustained and even enlarged the level of devaluation. The Philippines experienced real appreciation from the year of reform until 1992. Indonesia succeeded in trade integration in both exports and imports during the adjustment process. The Philippines also experienced higher trade integration through expansion of both sides; however, import growth overtook export growth due to real appreciation, which resulted in persistent balance of payments problems. China's trend trade integration rate actually slowed due to excessively export-oriented reforms that included establishing special economic zones for promoting exports. China's trade integration up to 1992, on average, had been unbalanced.[32] However, with the projected membership in the World Trade Organization (WTO), and with complementary domestic reforms proceeding at a rapid pace, China's trade reform seems to have recently entered the second phase, where import restrictions will be gradually reduced. The effects of reduced import restrictions have been reinforced with the unification of the exchange rate in early 1994. In fact, China's speed of trade integration was a strong positive 7.8 percent, on average, for 1991-93, emerging from a negative 6.3 percent during 1986-90. Supported by a buoyant domestic economy, China's imports grew at over 26 percent a year, on average, during 1991-93 (as opposed to falling 5 percent a year, on average, in 1986-90).

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[31] Dean, Desai, and Riedel, p. 86.

[32] Negative average import growth during the latter half of the 1980s was in fact brought about by stringent import control under economic austerity programs during 1986 and 1989-90.

Chart 14

## Trade Integration Before and After the Trade Policy Reform of the 1980s
### (East Asia)



Growth Rate of Import GDP Ratio (percent)

## Real Effective Exchange Rate
### (1980=100)



In Latin America, reform involved simultaneous moves toward neutrality and liberality. Liberalization reduced both import/export impediments (tariff rates and quantitative restrictions) and restrictions on foreign exchange markets. Reforms in Chile, Columbia, and Mexico—the early reformers—were characterized by initial efforts to devalue their currencies. Argentina, Brazil, Peru, and Venezuela—the late reformers—
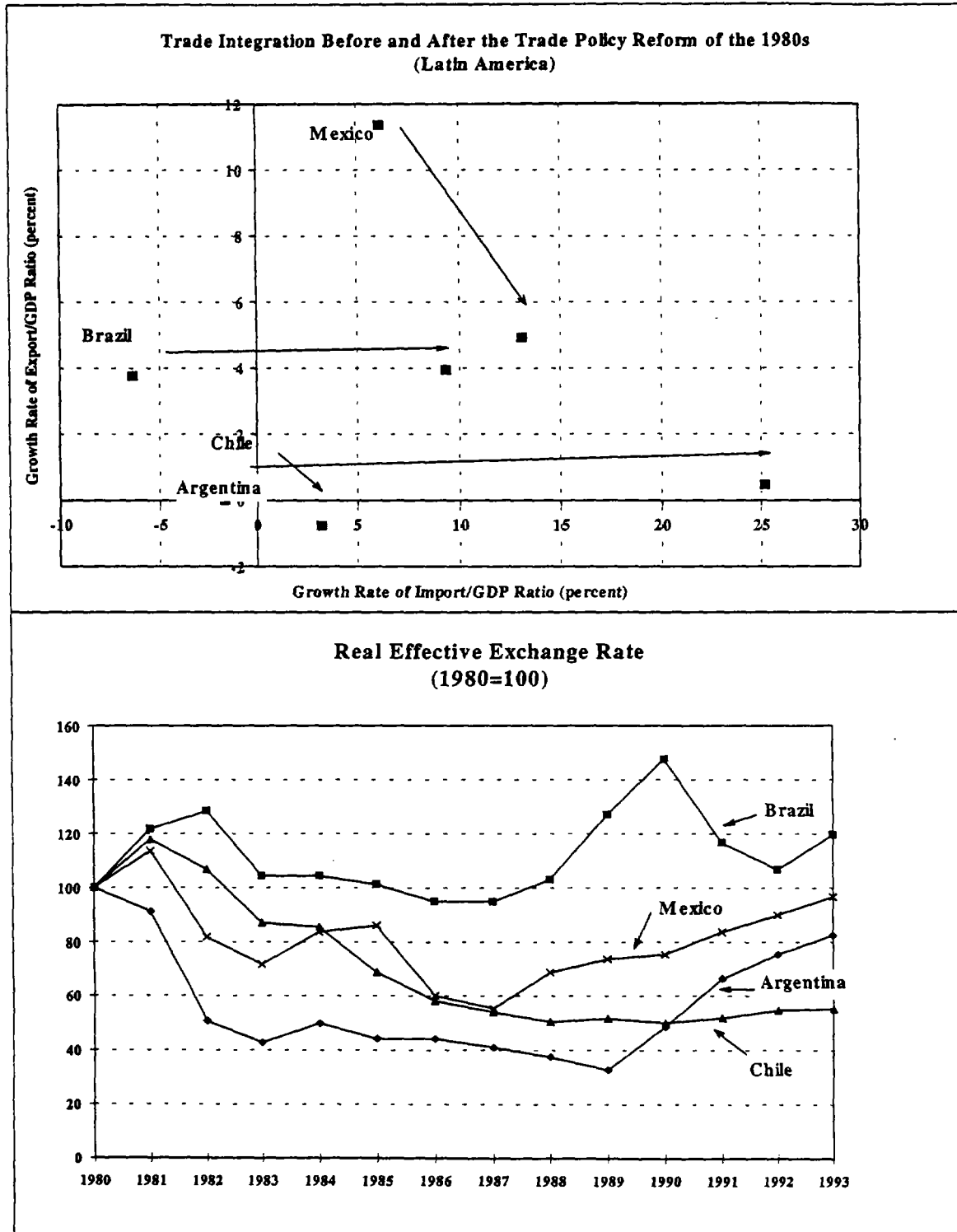
had a higher degree of anti-export bias and distortions manifested in higher black market premia before the reform. The premia were successfully reduced in these economies, except in Brazil, where galloping inflation undermined the reform efforts. All seven Latin American reformers listed in Table 4 generally achieved a higher pace of trade integration and market openness. In Chart 15, the unbalanced import-dominant integration is particularly visible for Argentina, Brazil, and Mexico. Dominance of import growth is also evident for Peru. In Mexico, the aggregate trend rate of trade integration was fairly constant before and after the reform. However, the components shifted drastically during the reform, with import growth overtaking export growth as the cause of overall trade integration. Mexico initially succeeded in depreciating the real effective exchange rate (26.2 percent depreciation between 1985 and 1986). However, the currency began to appreciate after it was pegged to the US dollar, as foreign capital inflow revived and nominal depreciation lagged behind the rate of inflation, producing a net appreciation of 3.7 percent up to 1992. Edwards warns that liberalization of the capital account prior to liberalization of the current account could provoke capital inflow if domestic financial reforms have occurred.[33] This could lead to exchange rate appreciation, undermining the efforts to reduce anti-export bias. Indeed, in Mexico, appreciation in real exchange rate brought out an unbalanced integration. Argentina, Brazil, Mexico, and Peru all share, by and large, the risk of unbalanced trade integration, since none of these countries has succeeded in effectively removing anti-export bias in their reform packages (see Chart 4, lower right quadrangle). In Chile, the trend in export/GDP ratio turned slightly positive in 1991-93, as opposed to negative 0.9 percent in 1986-90. Nogues and Gulati have argued that although Chile's export success is still limited in scope, that success has been due to the openness of its import regime and significant real devaluation of the currency.[34] Dean, Desai, and Riedel have also noted Chile's commitment to avoiding real appreciation and maintaining stability in the real exchange rate, to preserve the competitiveness of the export sector.[35] As in Mexico, large capital inflows had put pressure to appreciate on the Chilean peso. Although the inflows appear to be largely foreign direct investment—in fact, FDI share in private capital flow was 43 percent, on average, during 1991-93, well over the Latin American average of 38 percent, and in sharp contrast to 33 percent in Mexico—the government has attempted to stem the short-run inflows to avoid revaluation. With these prudent reform measures, Chile's export growth accelerated from 5.6 percent a year, on average, during 1986-90 to 7.5 percent a year for 1991-93. It is expected to accelerate further, to 8.3 percent a year during OECD recoveries in 1994-96. Chile's output growth, which accelerated from 2.2 percent a year in 1971-85 to 6.5 percent a year in 1986-90 to 7.4 percent a year during 1991-93, is projected to stabilize in the 5-6 percent range in the coming decade. In terms of Chart 4, Chile is projected to move into the upper right quadrangle, joining the group of successful trade integrators.

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[33] Sebastian Edwards, "The Sequencing of Economic Reform: Analytical Issues and Lessons from Latin American Experiences," *World Economy*, Vol. 13, 1990.

[34] Julio Nogues and S. Gulati, "Economic Policies and Performance under Alternative Trade Regimes: Latin America during the 80s," World Bank Latin America and Caribbean Technical Department Regional Studies Program, Report No. 16, 1992.

[35] Dean, Desai, and Riedel, p. 64.

Chart 15

**Trade Integration Before and After the Trade Policy Reform of the 1980s**
**(Latin America)**



Growth Rate of Export/GDP Ratio (percent)

Growth Rate of Import/GDP Ratio (percent)
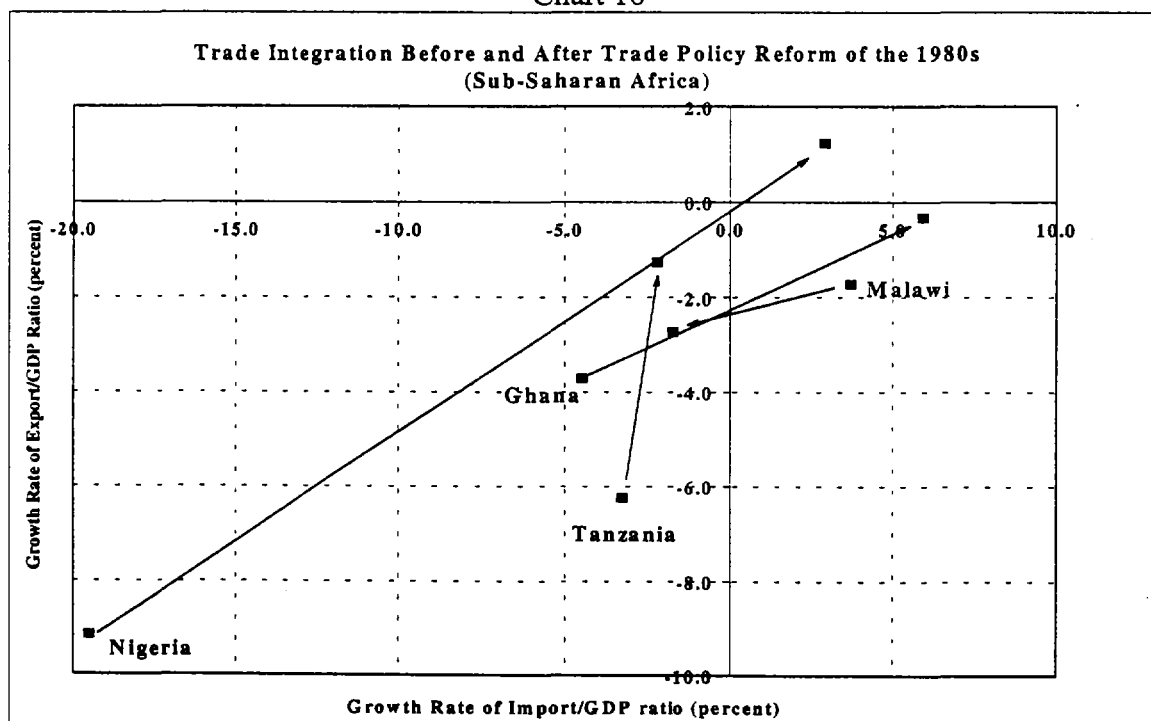
**Real Effective Exchange Rate**
**(1980=100)**



The trade regimes of both African Financial Community (CFA) members and non-CFA members of Sub-Saharan Africa before 1985 were characterized by the severity of

33

quantitative restrictions covering virtually all categories, and by high tariff rates that were probably largely redundant due to high nontariff barriers. All countries presented in Table 4 (all non-CFA members), particularly Ghana, Nigeria, and Tanzania, initiated their reform by attempting to reform the foreign exchange markets to correct highly overvalued currencies, as manifested in high black market premia. These countries all succeeded in reducing black market premia and all except Malawi accomplished sustained real devaluation of their currencies. Except for Tanzania and Zaire, they all substantially reduced or eliminated quantitative restrictions. Tariff rates, however, were not touched. Although reversals of reform have been frequent, Ghana, Madagascar, and Nigeria succeeded in attaining a positive rate of trade integration after the reform, while Tanzania and Zaire slowed the pace of separation from the world market. Kenya and Malawi, on the other hand, either started to separate or increased the pace of separation from the world market. In the process, Malawi experienced real appreciation while Kenya managed to produce only a negligible amount of devaluation. In these economies, the rate of improvement in price distortions was much smaller than in the other reformers. In sum, non-CFA Sub-Saharan Africa barely stopped the process of isolation from the world market after the mid 1980s (see Chart 16 for patterns of integration). CFA members (not listed in Table 4) failed to devalue their currencies during the 1980s or to carry out other trade reforms, only to realize the need for substantial devaluation in 1994. The projected moderate trend increase in trade integration ratio shown in Chart 12 takes account of the positive future effects from the 1994 initiatives of the CFA members.

Chart 16



Trade Integration Before and After Trade Policy Reform of the 1980s
(Sub-Saharan Africa)

**Real Effective Exchange Rate**
**(1980=100)**
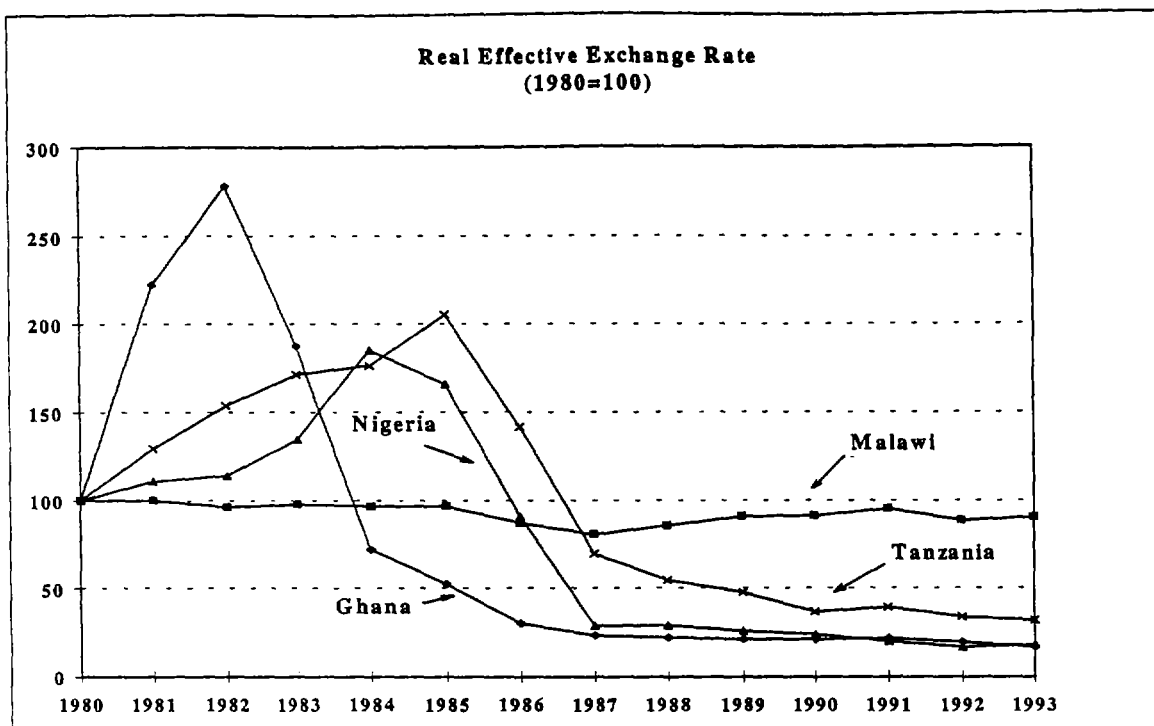


Most developing countries have been undertaking unilateral liberalization since the mid 1980s to benefit from the rapidly globalizing market. This wave of liberalization represents an effective shift in development strategy from an inward-oriented import-substituting framework designed strategically to reduce dependence on the outer world, to an outward-oriented export-promoting framework designed to create a virtuous cycle of higher integration and faster growth with expanded opportunities. However, dragging the legacy of the old framework—the anti-export bias that is typically manifested in overvalued currency and real exchange rate appreciation—when one enters the rapidly globalizing market is dangerous, even suicidal. A real exchange appreciation not only prices exports out of world markets, on the demand side, but also takes resources out of the tradable (export) sector by increasing relative price of nontradables to tradables, on the supply side. Aggregate effects of the appreciation on investment are ambiguous; however, this appreciation unambiguously reduces investments in export-oriented sectors. The failure to foster productivity and export competitiveness by eliminating anti-export bias in the open framework has resulted in balance of payment difficulties, forced contraction, and lower levels of growth. Countries situated in the lower-right quadrant in Chart 17 (Chart 4 reproduced) are the ones that followed an unbalanced path of integration. Balanced integration into the rapidly globalizing world market calls for sound growth of exports or for intertemporal collateral of future export growth. This can only be attained by a prudent combination of complementary domestic and border policies that encourage long-term productive investment, supported by savings drawn in by higher expected rates of return due to efficiency gains from reforms that encourage exports.

## Chart 17. Speed of Trade Integration and GDP Growth, 1970-1992
## (18 Major Developing Economies)



Correlation Coefficient = +0.51

GDP Growth Rate (percent)

Korea

China

Mlaysia

Thailand

Indonesia

Saudi Arabia

Algeria  +India  Mexico

Brazil

Chile

Nigeria  Philippines

Iran

Venezuela

FSU  South Africa

Argentina

Speed of Integration (percent)
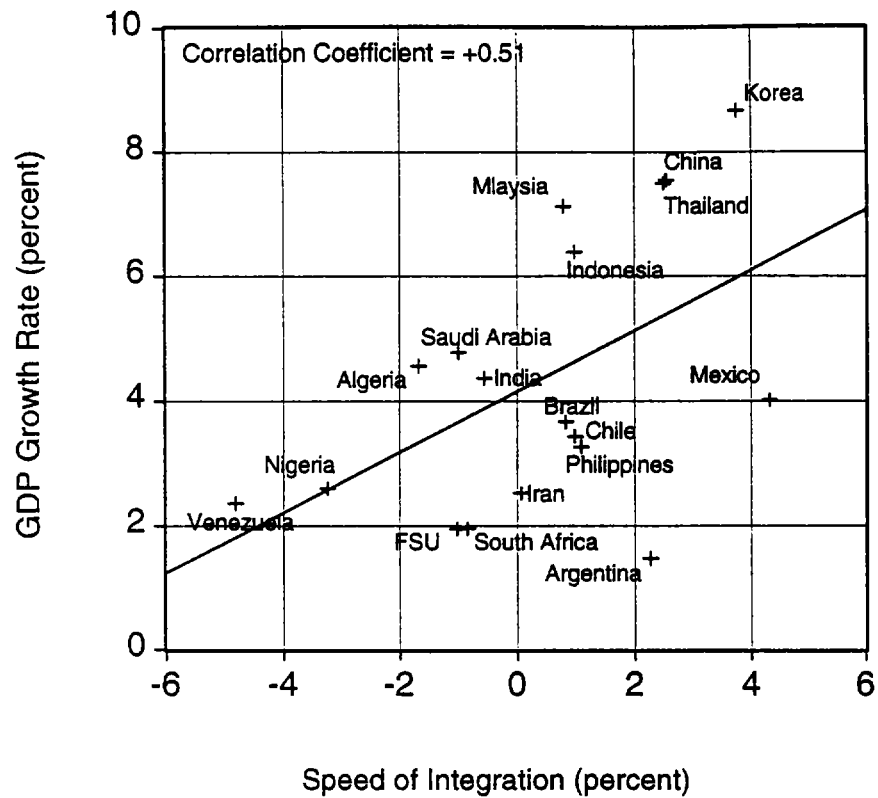
Source: International Economics Department, World Bank.

# V.    Concluding Remarks

The growth of world trade relative to world income in the 1990s has been much higher than anything experienced in the 1970s or 1980s. Although world trade growth slowed from a buoyant rate of 6.1 percent a year in the latter half of 1980s, when world output expanded an average of 3.3 percent a year, it was a positive 4.1 percent a year during 1991-93, even though world GDP growth was a recessionary 1.1 percent during the same period. In 1994, world merchandise trade volume grew an estimated 9.2 percent, which, in relation to 2.8 percent world GDP growth, implies an elasticity of world trade of 3.3 with respect to GDP. The average world trade elasticity was 3.7 during 1991-93. This was not only more than twice the trade elasticity of 1.5 prevailing in the 1970s and 1980s, it also much higher than in any single year in that period, including 1976 and 1984, which, like 1994, were years of cyclical upswing from world recession.

The observed decoupling of world trade and output movements in the early 1990s was caused by three factors that worked in favor of sustained trade growth in this recessionary period: the desynchronization of business cycles in the United States, Japan, and Europe; the continuation and even acceleration of growth in the developing world, notably in East Asia and Latin America, the new growth poles; and the effective transfer of purchasing power through a surge in private capital flows to highly absorbent LMIC regions, namely East Asia and Latin America.

From a longer-term perspective, one can say that this new robustness in world trade growth has been brought out—at least to a substantial degree—by the structural changes and liberalization drives that many developing countries undertook in the mid 1980s to early 1990s.

The trend toward world integration through trade accelerated sharply in the mid 1980s. Measured by a ratio of trade to output, this meant a reversal in the once-slowed trend in trade integration for OECD, which had been caused by macroeconomic instabilities and heightened nontariff barriers in 1970s and early 1980s. For LMIC, this trend was a new phenomenon; out of a 16 percent rise in LMIC trade integration ratio (trade/GDP) over the past three decades, a 15 percent surge was observed only after the mid 1980s, when a series of reform and liberalization efforts enabled LMIC to vigorously take part in the world market. The emergence of the LMIC markets, combined with a decline in commodity prices, a surge in foreign investment activities after the Plaza Accord, and a series of bilateral and regional trade arrangements such as the EU and the US-Canada free trade agreement, helped to accelerate integration in the OECD economies.

What happened in the early 1990s is often characterized as trade-output decoupling. It was an enormous acceleration in the speed of LMIC trade integration into the world market, which compensated a deceleration in trade integration among the OECD countries, where the integration is highly pro-cyclical. With LMICs playing an

increased role in the world trade market, a robust trade growth of over 6 percent a year, on average, is projected for the coming decade.

Although the LMIC regions are projected to contribute around 30 percent to incremental world trade during 1997-2004, prospects for trade integration differ by region. East Asia, with its sizable market and autonomous regional integration forces, can be considered a structural integrator with prospects of sustained integration into the world market. Latin America and Eastern Europe and Central Asia have been contingent integrators in which the process of integration will continue to depend on capital inflow. The Middle East, North Africa, and Sub-Saharan Africa region has been and will continue to be dependent on favorable terms of trade and capital flows—in the case of Sub-Saharan Africa, official flows—for their integration into the world market. So far the evidence shows that only structural integrators have been able to build a sustainable virtuous cycle of higher speed of integration and higher output/income growth.

The largely unilateral wave of liberalization among developing countries observed since the mid 1980s represents an effective shift in development strategy from an inward-oriented to an outward-oriented (export-promoting) framework designed to create a virtuous cycle of higher integration and faster growth under an expanded opportunity set. However, evidence shows that dragging the legacy of the old framework—the anti-export bias that is typically manifested in overvalued currency—when one enters the rapidly globalizing market is dangerous, even suicidal. A real exchange appreciation not only prices exports out of world markets, on the demand side, but also takes resources out of the tradable (export) sector by increasing relative price of nontradables to tradables, on the supply side.

Another problem is that excessive dependence on capital inflow, whether private investment or official assistance, puts pressure on currency. Therefore, careful management is called for. Official assistance, for instance, should not be carelessly directed to general expenditures that, on balance, favor nontradable sectors.

Balanced integration to the rapidly globalizing world market calls for sound growth of exports or for intertemporal collateral of future export growth. This can be attained only by a prudent combination of complementary domestic and border policies that encourage long-term productive investment in the tradable (exportable) sector, supported by foreign capital and domestic savings drawn in by higher expected rates of return due to efficiency gains attained through reforms. Preserving a perceived rate of return on investment—in tradable and complementary sectors—for both domestic and foreign investors is a key to becoming a structural integrator in which export and import capacities both expand in a balanced, sustainable manner. Further research efforts are called for in identifying possible paths for LMICs to become sustainable, structural integrators into the world market.

# APPENDIX

# Appendix A: Classification of Economies, 1995

| Income Group | Subgroup | Sub-Saharan Africa | | Asia | | Europe and Central Asia | | Middle East and North Africa | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | East and Southern Africa | West Africa | East Asia and Pacific | South Asia | Eastern Europe and Central Asia | Rest of Europe | Middle East | North Africa | Americas |
| Low-Income | | Burundi Comoros Eritrea Ethiopia Kenya Lesotho Madagascar Malawi Mozambique Rwanda Somalia Sudan Tanzania Uganda Zaire Zambia Zimbabwe | Benin Burkina Faso Central African Republic. Chad Cote d'Ivoire Equatorial Guinea Gambia, The Ghana Guinea Guinea-Bissau Liberia Mali Mauritania Niger Nigeria Sao Tome and Principe Sierra Leone Togo | Cambodia China Lao PDR Mongolia Myanmar Viet Nam | Afghanistan Bangladesh Bhutan India Nepal Pakistan Sri Lanka | Albania Armenia Bosnia and Herzegovina Georgia Tajikistan | | Yemen. Rep. | Egypt, Arab Rep. | Guyana Haiti Honduras Nicaragua |
| Middle-Income | Lower | Angola Botswana Djibouti Namibia Swaziland | Cameroon Cape Verde Congo Senegal | Fiji Indonesia Kiribati Korea, Dem. Rep. Marshall Islands Micronesia, Fed. Sts. N. Mariana Is. Papua New Guinea Philippines Solomon Islands Thailand Tonga Vanuatu Western Samoa | Maldives | Azerbaijan Bulgaria Croatia Czech Republic Kazakhstan Kyrgyzy Republic Latvia Lithuania Macedonia FYR [a] Moldova Poland Romania Russian Federation Slovak Republic Turkmenistan Ukraine Uzbekistan Yugoslavia, Fed. Rep. | Turkey | Iran, Islamic Rep. Iraq Jordan Lebanon Syrian Arab Rep. West Bank and Gaza | Algeria Morocco Tunisia | Belize Bolivia Colombia Costa Rica Cuba Dominica Dominican Republic Ecuador El Salvador Grenada Guatemala Jamaica Panama Paraguay Peru St. Vincent and the Grenadines Suriname |
| | Upper | Mauritius Mayotte Reunion Seychelles South Africa | Gabon | American Samoa Guam Korea, Rep. Macao Malaysia New Caledonia | | Belarus Estonia Hungary Slovenia | Gibraltar Greece Isle of Man Malta Portugal | Bahrain Oman Saudi Arabia | Libya | Antigua and Barbuda Argentina Aruba Barbados Brazil Chile French Guiana Guadeloupe Martinique Mexico Netherlands Antilles Puerto Rico St. Kitts and Nevis St. Lucia Trinidad and Tobago Uruguay Venezuela |
| subtotal: | 170 | 27 | 23 | 26 | 8 | 27 | 6 | 10 | 5 | 38 |

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| Income Group | Subgroup | Sub-Saharan Africa | | Asia | | Europe and Central Asia | | Middle East and North Africa | | |
| | | East and Southern Africa | West Africa | East Asia and Pacific | South Asia | Eastern Europe and Central Asia | Rest of Europe | Middle East | North Africa | Americas |
|---|---|---|---|---|---|---|---|---|---|---|
| High-income | OECD Countries | | | Australia<br>Japan<br>New Zealand | | | Austria<br>Belgium<br>Denmark<br>Finland<br>France<br>Germany<br>Iceland<br>Ireland<br>Italy<br>Luxembourg<br>Netherlands<br>Norway<br>Spain<br>Sweden<br>Switzerland<br>United Kingdom | | | Canada<br>United States |
| | Non OECD Countries | | | Brunei<br>French Polynesia<br>Hong Kong<br>Singapore<br>OAE [b] | | | Andorra<br>Channel Islands<br>Cyprus<br>Faeroe Islands<br>Greenland<br>San Marino | Israel<br>Kuwait<br>Qatar<br>United Arab Emirates | | Bahamas, The<br>Bermuda<br>Cayman Islands<br>Virgin Islands (U.S.) |
| Total: | 210 | 27 | 23 | 34 | 8 | 27 | 28 | 14 | 5 | 44 |

a. Former Yugoslav Republic of Macedonia.
b. Other Asian economies - Taiwan, China.

For operational and analytical purposes the World Bank's main criterion for classifying economies is gross national product (GNP) per capita. Every economy is classified as low-income, middle-income (subdivided into lower-middle and upper-middle), or high-income. Other analytical groups, based on geographic regions, exports, and levels of external debt, are also used.

Low-income and middle-income economies are sometimes referred to as developing economies. The use of the term is convenient; it is not intended to imply that all economies in the group are experiencing similar development or that other economies have reached a preferred or final stage of development. Classification by income does not necessarily reflect development status.

### Definitions of groups
These tables classify all World Bank member economies, and all other economies with populations of more than 300,000.

*Income group* : Economies are divided according to 1993 GNP per capita, calculated using the *World Bank Atlas* method. The groups are: low-income, $695 or less; lower-middle-income, $696-$2,785; upper-middle-income, $2,786-$8,625; and high-income, $8,626 or more.

The estimates for the republics of the former Soviet Union are preliminary and their classification will be kept under review.

# Appendix B: Prospects for Japan's Trade—Market Opening?

While the buoyant import demand in Japan — in the midst of its sluggish output growth — has been triggered by the yen's appreciation and structural increases in import elasticities, Japan's exports have not really grown since 1992, mainly due to a loss in price competitiveness also caused by the yen's appreciation. Unlike the past cases where Japan resorted to an export drive when domestic activities became sluggish (importation of economic recovery), Japan has been 'exporting recovery' during the period of current prolonged contraction and stagnancy (see charts B.1 and B.2).

## Chart B.1[a]
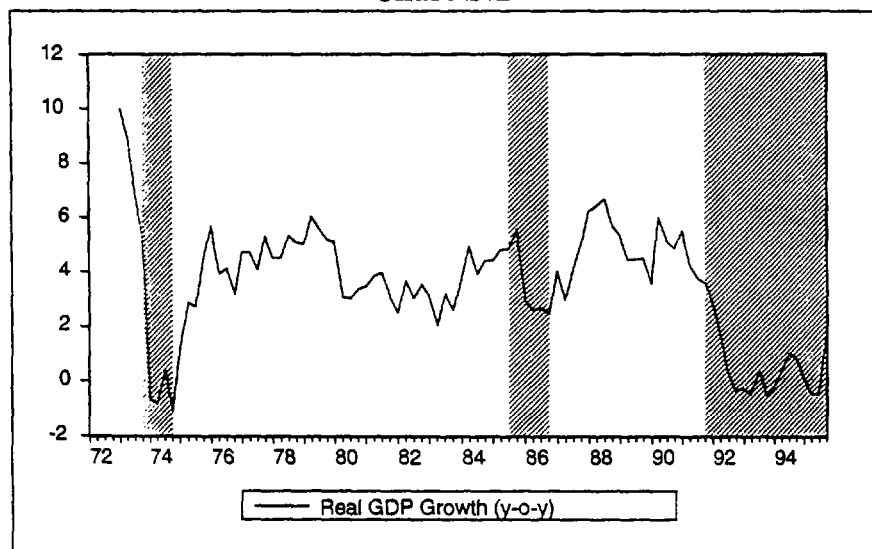


a) Shaded areas in these charts correspond to periods of business-cycle downturns.

## Chart B.2



42
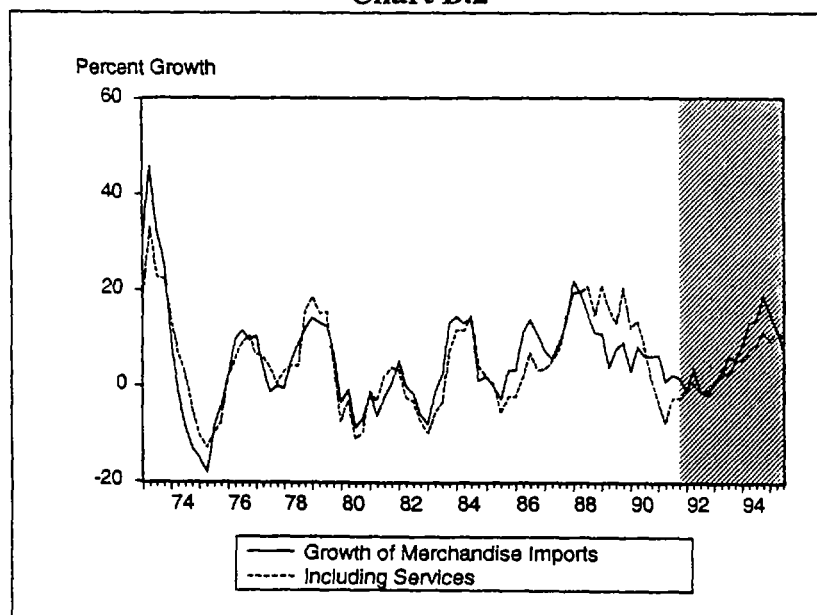
*Stagnant Japanese Exports Due To a Loss in Price Competitiveness*

Recent turbulence in key currency exchange rates has produced profoundly different export performance in the affected countries, by altering the relative positions of their regional and global price competitiveness. Such effects are most visible among the OECD countries, since they trade predominantly in manufactured goods that face higher price elasticity of import demand. In the case of Japan, the yen's rapid appreciation coincided with the period of sharp downturn after late 1991, contributing to the lengthening of the downturn by effectively ruling out the possibility of an export drive. Accordingly, Japan's exports have been stagnant for more than three years (see Chart B.3).

**Chart B.3**

**Changes in Real Effective Exchange Rates and Export Performance, 1992-94**
**OECD**



*Sample Correlation Coefficient = -0.72*

Export Volume (% change 1994/1992)

Real Effective Exchange Rate (% change 1994/1992)
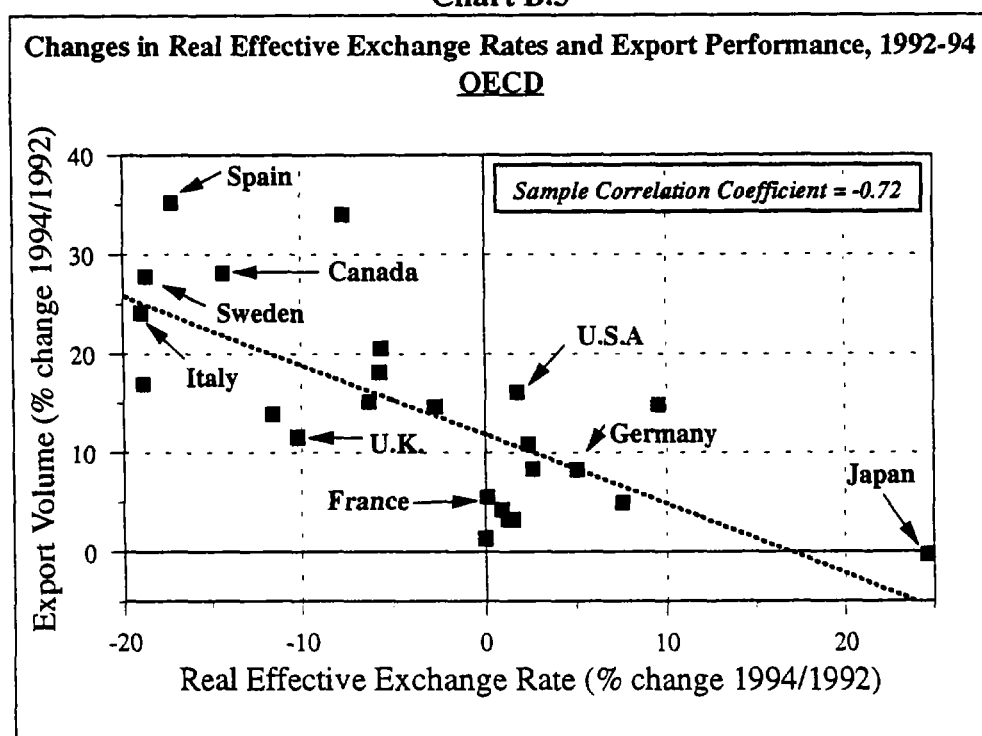
*East Asia as a Major Beneficiary*

Negative effects on export growth within OECD economies (particularly Japan) that have appreciating currencies will be only partially offset by rising exports in European industrial economies that have depreciating currencies, since those with depreciating currencies have already been operating at a capacity-stretching level. Export expansion in the United States will be only gradual, given its already high activity level and the appreciation of the dollar vis-à-vis the Canadian and Mexican currencies. The East Asian economies, as the principle beneficiaries of the competitiveness boost resulting from the yen's appreciation, have been expanding their exports—and will continue to do so—by

finding new markets in Japan and increasing their market shares elsewhere (see Table B.1). Already in 1994, these economies increased their share of the US market by 2-3 percent at the expense of Japan's share in the same market.

## Table B.1
### East Asia: Changes in Competitive Positions and Export Performance
(% change between 1992 and 1994)

|  | Real Effective Exchange Rates | Bilateral Exchange Rates (vs. $) | Bilateral Exchange Rates (vs. yen) | Export Volumes |
|---|---|---|---|---|
| Taiwan | -6.9 | -5.1 | -30.4 | 14.1 |
| Singapore | 3.9 | 6.2 | -16.2 | 39.7 |
| Hong Kong | 13.2 | 0.0 | -19.6 | 23.2 |
| China | -19.8 | -56.3 | -93.7 | 33.0 |
| South Korea | -0.4 | -2.9 | -27.5 | 20.1 |
| Indonesia | 1.8 | -6.5 | -32.0 | 15.6 |
| Thailand | 0.9 | 1.0 | -22.8 | 32.4 |
| Malaysia | -4.4 | -3.0 | -27.7 | 38.2 |
| Philippines | 4.1 | -3.6 | -28.3 | 26.9 |

Note: Minus sign for changes in exchange rates represents depreciation.

*Japan is Opening Its Market for Imports*

Chart B.3 shows that the strong import growth observed over the past two years, despite sluggish output growth, was brought about by the appreciation of the yen, which lowered import prices denominated in yen by about 20 percent. With an increasing degree of price pass-through to consumers, the yen's rapid appreciation has triggered a surge in demand for imported consumer goods.

**Chart B.3**



Recent Developments in Japan's Import Demand
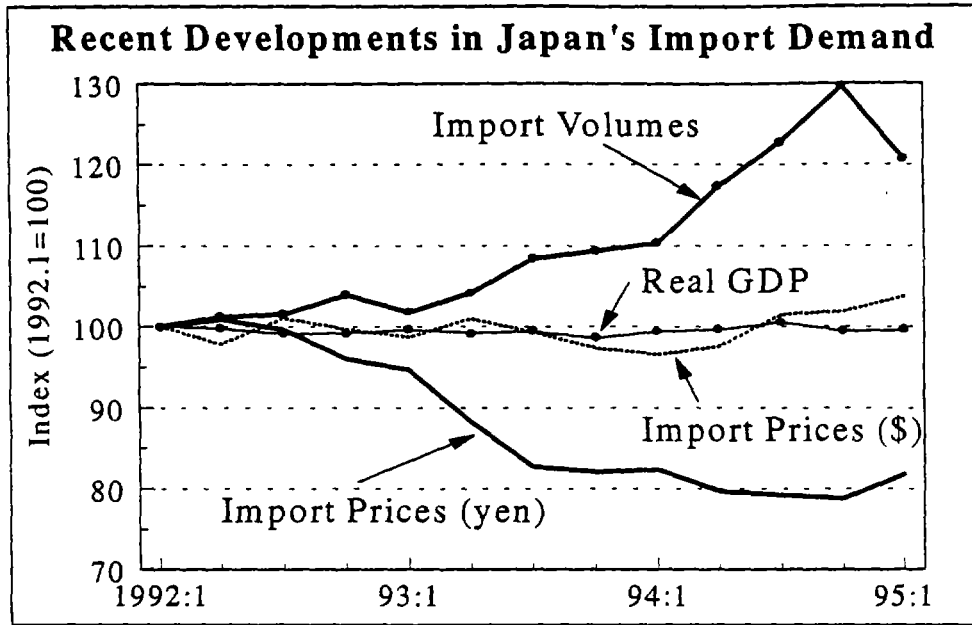
Chart B.4 shows that fixed-elasticity estimates of imports largely underestimate import demand in the most recent period, suggesting structural increases in import elasticities. Fixed elasticity import demand function is estimated as:

$$\text{(B.1)} \quad \ln \text{IMP} = -1.01 + 1.53 \ln \text{GDP} - 0.29 \ln \text{RWPI}$$

$$(-1.7) \quad (16.3)$$

| t | | |
|---|---|---|
| t=0 | -0.0312 | (-0.51) |
| t=1 | -0.0647 | (-3.00) |
| t=2 | -0.0783 | (-4.11) |
| t=3 | -0.0721 | (-2.64) |
| t=4 | -0.0460 | (-2.13) |

Adjusted R-squared 0.942; D.W. 0.75
Sample Period: 1986q1-1995q1
No. of Observations: 37

where, IMP: Import Volume Index (SA, 1992q1=100)
GDP: Real GDP Index (SA, 1992q1=100)
RWPI: Relative Price Index (=Import Unit Value Index/Domestic WPI) (SA, 1992q1=100).

## Chart B.4

### Actual vs. Fixed-Elasticity Estimation of Import Volumes
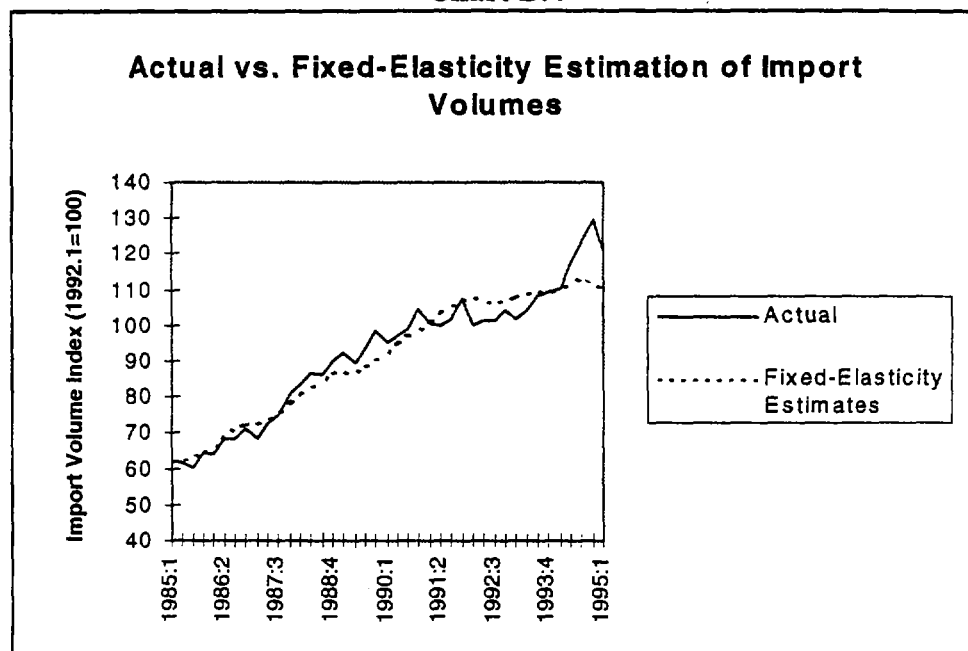


In a recent Economic White Paper, Japan's Economic Planning Agency (EPA) also reported increased income and price elasticities of import demand by showing estimated import demand functions in the following form for two adjacent periods, first quarter 1980-fourth quarter 1986, and first quarter 1987-fourth quarter 1994:[B1]

$$(B.2) \quad \ln IMP = Const + \alpha \ln GDP + \beta \ln PZL_{-1} + \gamma \ln RWPI$$

where, $PZL_{-1}$ is a lagged index of manufacturing inventory.

In these estimates, income elasticity increased from 1.15 to 1.85 and price elasticity increased from –0.40 to –0.55 between the two adjacent periods.

By further decomposing income elements into consumption and capital accumulation, it is shown that most of the surge in income elasticity of demand has come from the household sector. Estimated import elasticity with respect to consumption expenditures increased from a negligible level of 0.06 to a strong 2.64 between these periods.

Japan's market opening is projected to proceed (see Chart B.5). Even under a more serious scenario of financial sector breakdown and renewed recession, however, the negative effects on Japan's import demand will be rather small. The following factors will support continuous penetration of foreign goods into Japan's markets:

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[B1] *Economic White Paper Fiscal Year 1995* (in Japanese), Economic Planning Agency, the Government of Japan, pp. 519-520.

- to stay price competitive, domestic manufacturers are likely to continue increasing their reliance on imported parts and materials;
- goods are increasingly produced outside at a lower cost and will be imported back to support society's shift to lower-cost producing and living;
- this trend is compatible with the projected shift in Japan's saving-investment differentials and its decreasing trade surplus due to the aging of its population.

**Chart B.5**

Import Penetration Into Japan's Market

Imports/GDP Ratio (volume)
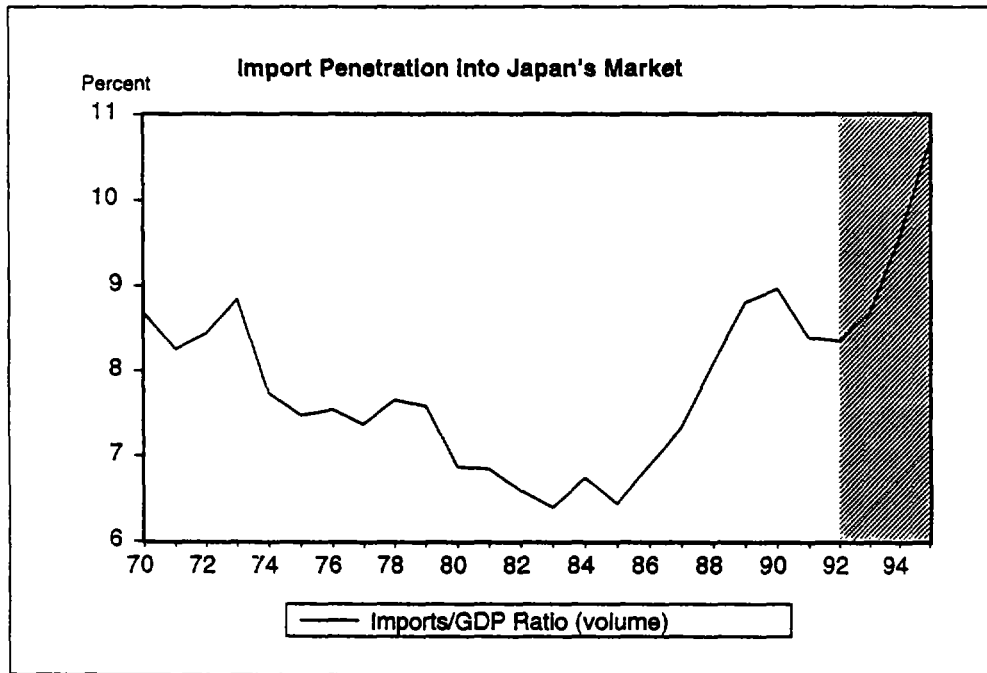
## Appendix C: Openness Rankings

This appendix presents some sample country rankings by openness measures.[c1] An unadjusted ranking by the size of trade/GDP ratio—where outputs are valued at market prices and converted into dollars using market exchange rates—is presented in Table C-1 (1990-92 averages). By this measure, China appears more open than the US or Japanese markets (in this order).

Adjusted rankings were created using: i) real (1987 US$) values of export and import of merchandise collected for the period 1990-1992; ii) population data; and iii) outputs evaluated using IMF purchasing power parity (PPP) scales for 130 countries covering the same period.

In the first column of Table C-2, countries are ranked by 'Trade/PPP-GDP Ratio' averaged for 1990-92. When outputs are adjusted using purchasing power parity, the Japanese and US markets appear more open than China's, thus reversing the ranking order made using the standard output measure.

In the second column of Table C-2, per capita trade figures for Japan and the United States—using 1987 trade valued in US$, averaged for 1990-92—are even larger than those for Malaysia.

Chart C.1 shows the relationship between trade/output ratio and output when purchasing power parity conversions are used in the computation of outputs. In the last column of Table C-3, "Trade/PPP-GDP Ratio" was further adjusted for the size of the economies. In this column, countries were ranked by the ratio of their actual "Trade/PPP-GDP Ratio" to an average "Trade/PPP-GDP Ratio" for economies of the same size, measured in purchasing power parity. Fitted values obtained through the following regression equation, estimated over a cross-section of data for 129 countries, were used as relevant averages (see Chart C.2):[c2]

$$(C.1) \quad (Trade \, / \, pppGDP) \quad = \quad \alpha + \beta \cdot \ln pppGDP + \gamma \cdot (\ln pppGDP)^2.$$

Then, the ratios used for the ranking were computed simply as:

$$(C.2) \quad \text{Ratio} = (\text{actual Trade/pppGDP ratio})/(\text{fitted Trade/pppGDP ratio}) \,.$$

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[c1] For motivation and issues related to a ranking of countries by openness, see arguments presented in Section III of the main text and footnotes 16 and 19.

[c2] Similar adjustments using GDP, per capita GDP, and population are fairly common in comparing trade/GDP ratios. See, for example, Hollis B. Chenery and Moshe Syrquin, *Patterns of Development, 1950-70*, Oxford University Press, 1975; or Moshe Syrquin and Hollis B. Chenery, "Patterns of Development, 1950 to 1983," *World Bank Discussion Papers*, No. 41, 1989.

## Chart C.1

### Relationship between Trade/PPP-GDP Ratio and PPP-GDP



PPP-GDP  (log scale)

## Chart C.2

### Fitted Pattern



PPP-GDP  (log scale)
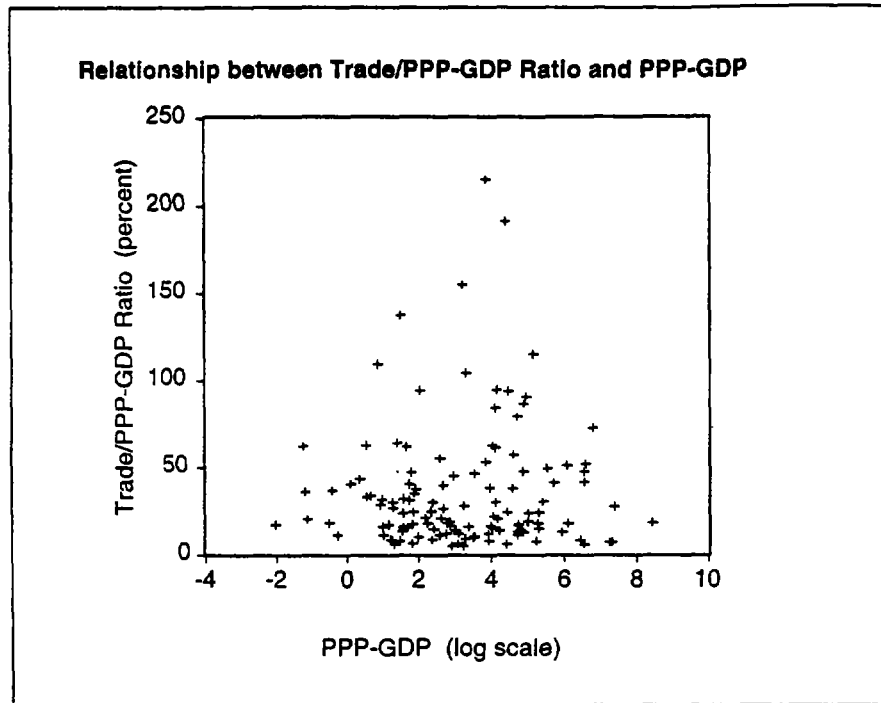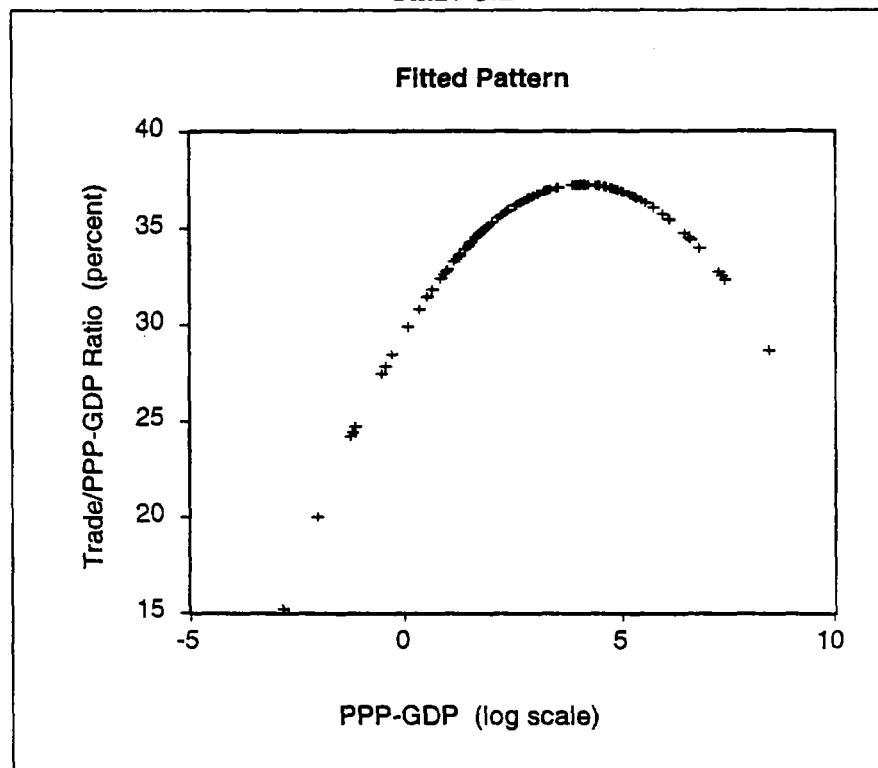
It is shown that, if size effects are accounted for, China's openness to international trade ranks very low—certainly lower than that of the Unites States or Japan—among 129 economies evaluated in this study. Its lack of openness to imports, in particular, seems to be a reason for this low ranking. This small ratio is the product of still tighter import controls and isolation of inner areas of the economy from world markets. Putting it in a different way, this result also implies China's great potential for integration into the world market through international trade.[c3]

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[c3] For further discussion on China's growth and import potential, see Andrea Boltho, Uri Dadush, Dong He, and Shigeru Otsubo, "China's Emergence: Prospects, Opportunities, and Challenges," *World Bank Policy Research Papers*, No. 1339, 1994.

## Table C-1 Openness Ranking (Unadjusted)

| Rank | Trade/mktGDP Ratio Percent | Rank | Rank | Trade/mktGDP Ratio Percent | Rank |
|------|------|------|------|------|------|
| 1 | Singapore | 359.6 | 1 | 68 | Sri Lanka | 45.0 | 68 |
| 2 | Hong Kong | 273.5 | 2 | 69 | Sierra Leone | 44.8 | 69 |
| 3 | Bahrain | 158.2 | 3 | 70 | United Kingdom | 44.8 | 70 |
| 4 | Swaziland | 147.7 | 4 | 71 | Zimbabwe | 43.9 | 71 |
| 5 | Panama | 138.6 | 5 | 72 | New Zealand | 43.1 | 72 |
| 6 | Guyana | 132.5 | 6 | 73 | Guinea | 43.1 | 73 |
| 7 | Malaysia | 130.9 | 7 | 74 | Guinea-Bissau | 43.0 | 74 |
| 8 | Malta | 122.7 | 8 | 75 | Suriname | 43.0 | 75 |
| 9 | Botswana | 113.6 | 9 | 76 | Yemen, Rep. | 42.0 | 76 |
| 10 | Belgium-Luxembourg | 111.1 | 10 | 77 | Yugoslavia | 41.7 | 77 |
| 11 | Lesotho | 106.6 | 11 | 78 | Finland | 41.0 | 78 |
| 12 | Namibia | 104.4 | 12 | 79 | South Africa | 40.7 | 79 |
| 13 | Mauritius | 98.6 | 13 | 80 | Chad | 39.9 | 80 |
| 14 | Ireland | 98.3 | 14 | 81 | Ghana | 39.0 | 81 |
| 15 | Djibouti | 94.4 | 15 | 82 | Morocco | 38.8 | 82 |
| 16 | Syrian Arab Rep. | 92.9 | 16 | 83 | Barbados | 38.3 | 83 |
| 17 | Taiwan | 88.9 | 17 | 84 | France | 37.2 | 84 |
| 18 | Kuwait | 88.6 | 18 | 85 | Uruguay | 36.9 | 85 |
| 19 | United Arab Emirates | 88.4 | 19 | 86 | Spain | 36.6 | 86 |
| 20 | Hungary | 84.8 | 20 | 87 | Greece | 36.5 | 87 |
| 21 | Gambia, The | 83.4 | 21 | 88 | Dominican Rep. | 36.3 | 88 |
| 22 | Equatorial Guinea | 82.7 | 22 | 89 | Ecuador | 36.2 | 89 |
| 23 | Portugal | 82.6 | 23 | 90 | Senegal | 35.8 | 90 |
| 24 | Netherlands | 82.1 | 24 | 91 | Venezuela | 35.3 | 91 |
| 25 | Zambia | 82.0 | 25 | 92 | Colombia | 35.0 | 92 |
| 26 | Czechoslovakia | 80.9 | 26 | 93 | Burkina Faso | 34.5 | 93 |
| 27 | Mauritania | 74.1 | 27 | 94 | Italy | 34.3 | 94 |
| 28 | Oman | 73.8 | 28 | 95 | El Salvador | 33.9 | 95 |
| 29 | Papua New Guinea | 73.7 | 29 | 96 | Bulgaria | 33.8 | 96 |
| 30 | Gabon | 73.1 | 30 | 97 | Pakistan | 33.5 | 97 |
| 31 | Togo | 71.0 | 31 | 98 | Mali | 33.3 | 98 |
| 32 | Switzerland | 70.2 | 32 | 99 | Guatemala | 33.3 | 99 |
| 33 | Saudi Arabia | 66.9 | 33 | 100 | Honduras | 33.0 | 100 |
| 34 | Jamaica | 66.3 | 34 | 101 | Romania | 32.3 | 101 |
| 35 | Korea, Rep. | 65.0 | 35 | 102 | Bolivia | 32.2 | 102 |
| 36 | Jordan | 64.8 | 36 | 103 | Comoros | 31.7 | 103 |
| 37 | Benin | 64.7 | 37 | 104 | Cameroon | 31.6 | 104 |
| 38 | Thailand | 63.3 | 38 | 105 | Tanzania | 31.6 | 105 |
| 39 | Tunisia | 63.0 | 39 | 106 | Egypt, Arab Rep. | 31.2 | 106 |
| 40 | Congo | 61.7 | 40 | 107 | Australia | 30.2 | 107 |
| 41 | Austria | 61.6 | 41 | 108 | Turkey | 29.4 | 108 |
| 42 | Norway | 61.6 | 42 | 109 | Uganda | 28.3 | 109 |
| 43 | Costa Rica | 60.2 | 43 | 110 | China | 27.8 | 110 |
| 44 | Liberia | 60.1 | 44 | 111 | Kenya | 27.6 | 111 |
| 45 | Cote d'Ivoire | 58.0 | 45 | 112 | Central African Rep. | 27.4 | 112 |
| 46 | Fiji | 57.3 | 46 | 113 | Peru | 26.8 | 113 |
| 47 | Paraguay | 57.1 | 47 | 114 | Nicaragua | 26.2 | 114 |
| 48 | Denmark | 57.1 | 48 | 115 | Madagascar | 26.0 | 115 |
| 49 | Cyprus | 57.1 | 49 | 116 | Niger | 26.0 | 116 |
| 50 | Seychelles | 57.1 | 50 | 117 | Algeria | 25.6 | 117 |
| 51 | Israel | 54.3 | 51 | 118 | Nepal | 24.3 | 118 |
| 52 | Trinidad and Tobago | 54.2 | 52 | 119 | Bangladesh | 24.1 | 119 |
| 53 | Angola | 54.1 | 53 | 120 | Somalia | 23.6 | 120 |
| 54 | Sweden | 52.5 | 54 | 121 | Iran, Islamic Rep. | 22.0 | 121 |
| 55 | Philippines | 51.5 | 55 | 122 | Burundi | 22.0 | 122 |
| 56 | Canada | 50.8 | 56 | 123 | Iraq | 20.7 | 123 |
| 57 | Mexico | 49.6 | 57 | 124 | Haiti | 19.2 | 124 |
| 58 | Malawi | 49.1 | 58 | 125 | Brazil | 17.6 | 125 |
| 59 | Germany | 48.8 | 59 | 126 | United States | 17.0 | 126 |
| 60 | Sao Tome and The Principe | 48.5 | 60 | 127 | Ethiopia | 16.8 | 127 |
| 61 | Poland | 48.5 | 61 | 128 | Rwanda | 15.1 | 128 |
| 62 | Cape Verde | 48.5 | 62 | 129 | Japan | 15.1 | 129 |
| 63 | Indonesia | 48.3 | 63 | 130 | Argentina | 15.1 | 130 |
| 64 | Chile | 47.9 | 64 | 131 | Former USSR | 14.2 | 131 |
| 65 | Nigeria | 47.2 | 65 | 132 | Myanmar | 13.0 | 132 |
| 66 | Zaire | 46.9 | 66 | 133 | India | 11.9 | 133 |
| 67 | Iceland | 45.6 | 67 | 134 | Sudan | 6.6 | 134 |

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Table C-2   Openness Ranking (Adjusted)

| Rank | Trade / pppGDP Ratio Percent | | Per Capita Trade US $ | | Openness Trade/pppGDP ratio adjusted for pppGDP Ratio | | Rank |
|---|---|---|---|---|---|---|---|
| 1 | Singapore | 214.9 | Singapore | 37,082 | Singapore | 5.8 | 1 |
| 2 | Hong Kong | 191.0 | Hong Kong | 26,981 | Hong Kong | 5.1 | 2 |
| 3 | Ireland | 154.5 | Switzerland | 19,250 | Ireland | 4.2 | 3 |
| 4 | Bahrain | 137.3 | United Arab Emirates | 17,279 | Bahrain | 4.0 | 4 |
| 5 | Netherlands | 114.7 | Netherlands | 13,507 | Malta | 3.4 | 5 |
| 6 | Malta | 109.2 | Norway | 12,146 | Netherlands | 3.1 | 6 |
| 7 | United Arab Emirates | 103.9 | Denmark | 11,837 | United Arab Emirates | 2.8 | 7 |
| 8 | Denmark | 94.3 | Bahrain | 11,794 | Panama | 2.7 | 8 |
| 9 | Panama | 93.9 | Ireland | 10,896 | Seychelles | 2.6 | 9 |
| 10 | Austria | 93.7 | Austria | 10,670 | Denmark | 2.5 | 10 |
| 11 | Switzerland | 90.4 | Sweden | 10,281 | Austria | 2.5 | 11 |
| 12 | Taiwan | 86.3 | Canada | 8,240 | Switzerland | 2.4 | 12 |
| 13 | Norway | 84.0 | Germany | 7,953 | Taiwan | 2.3 | 13 |
| 14 | Sweden | 79.0 | Finland | 7,503 | Norway | 2.3 | 14 |
| 15 | Germany | 72.6 | Malta | 7,165 | Germany | 2.1 | 15 |
| 16 | Botswana | 64.1 | France | 6,531 | Sweden | 2.1 | 16 |
| 17 | Swaziland | 62.5 | Taiwan | 5,714 | Swaziland | 2.0 | 17 |
| 18 | Portugal | 62.3 | United Kingdom | 5,645 | Botswana | 1.9 | 18 |
| 19 | Seychelles | 61.9 | Israel | 5,137 | Gabon | 1.8 | 19 |
| 20 | Gabon | 61.8 | Italy | 4,982 | Portugal | 1.7 | 20 |
| 21 | Finland | 61.0 | Kuwait | 4,980 | Finland | 1.6 | 21 |
| 22 | Malaysia | 57.1 | New Zealand | 4,633 | Malaysia | 1.5 | 22 |
| 23 | Oman | 55.0 | Oman | 4,618 | Oman | 1.5 | 23 |
| 24 | Israel | 53.0 | Australia | 3,981 | France | 1.5 | 24 |
| 25 | France | 51.6 | Cyprus | 3,905 | Equatorial Guinea | 1.5 | 25 |
| 26 | Canada | 51.0 | Saudi Arabia | 3,815 | Canada | 1.4 | 26 |
| 27 | Korea, Rep. | 49.1 | Portugal | 3,576 | Israel | 1.4 | 27 |
| 28 | Saudi Arabia | 47.3 | Japan | 3,528 | Suriname | 1.4 | 28 |
| 29 | United Kingdom | 47.2 | United States | 3,277 | United Kingdom | 1.4 | 29 |
| 30 | Cyprus | 47.0 | Malaysia | 3,232 | Guyana | 1.4 | 30 |
| 31 | New Zealand | 46.0 | Spain | 3,195 | Korea, Rep. | 1.4 | 31 |
| 32 | Kuwait | 44.8 | Panama | 2,918 | Cyprus | 1.3 | 32 |
| 33 | Suriname | 43.1 | Korea, Rep. | 2,876 | Gambia, The | 1.3 | 33 |
| 34 | Italy | 41.2 | Gabon | 2,754 | Saudi Arabia | 1.3 | 34 |
| 35 | Spain | 40.9 | Seychelles | 2,603 | New Zealand | 1.2 | 35 |
| 36 | Guyana | 40.4 | Czechoslovakia | 2,332 | Kuwait | 1.2 | 36 |
| 37 | Mauritius | 40.2 | Barbados | 2,218 | Italy | 1.2 | 37 |
| 38 | Cote d'Ivoire | 39.5 | Mauritius | 2,070 | Mauritius | 1.2 | 38 |
| 39 | Hungary | 37.9 | Trinidad and Tobago | 2,052 | Spain | 1.1 | 39 |
| 40 | Czechoslovakia | 37.7 | Yugoslavia | 1,968 | Cote d'Ivoire | 1.1 | 40 |
| 41 | Papua New Guinea | 37.3 | Botswana | 1,966 | Papua New Guinea | 1.1 | 41 |
| 42 | Gambia, The | 36.3 | Hungary | 1,903 | Liberia | 1.1 | 42 |
| 43 | Equatorial Guinea | 35.8 | Greece | 1,816 | Barbados | 1.0 | 43 |
| 44 | Jamaica | 34.8 | Suriname | 1,514 | Hungary | 1.0 | 44 |
| 45 | Liberia | 33.5 | Swaziland | 1,287 | Czechoslovakia | 1.0 | 45 |
| 46 | Barbados | 33.0 | Fiji | 1,121 | Jamaica | 1.0 | 46 |
| 47 | Congo | 31.7 | Jordan | 1,051 | Fiji | 1.0 | 47 |
| 48 | Fiji | 31.5 | Costa Rica | 1,035 | Congo | 0.9 | 48 |
| 49 | Zambia | 31.0 | Syrian Arab Rep. | 1,007 | Zambia | 0.9 | 49 |
| 50 | Australia | 30.2 | Bulgaria | 981 | Guinea | 0.9 | 50 |
| 51 | Guinea | 30.0 | Chile | 972 | Mauritania | 0.9 | 51 |
| 52 | Greece | 29.7 | Venezuela | 963 | Japan | 0.8 | 52 |
| 53 | Costa Rica | 29.7 | Jamaica | 948 | Sao Tome and The Principe | 0.8 | 53 |
| 54 | Mauritania | 28.4 | Mexico | 942 | Australia | 0.8 | 54 |
| 55 | Tunisia | 27.7 | Uruguay | 927 | Costa Rica | 0.8 | 55 |
| 56 | Japan | 27.3 | South Africa | 890 | Comoros | 0.8 | 56 |
| 57 | Togo | 26.7 | Tunisia | 867 | Greece | 0.8 | 57 |
| 58 | Jordan | 26.1 | Thailand | 860 | Togo | 0.8 | 58 |
| 59 | Trinidad and Tobago | 24.6 | Poland | 730 | Tunisia | 0.7 | 59 |
| 60 | Paraguay | 24.4 | Algeria | 660 | Jordan | 0.7 | 60 |
| 61 | Honduras | 24.2 | Congo | 649 | Honduras | 0.7 | 61 |
| 62 | Yugoslavia | 24.1 | Papua New Guinea | 637 | Trinidad and Tobago | 0.7 | 62 |
| 63 | Thailand | 24.0 | Iran, Islamic Rep. | 619 | Benin | 0.7 | 63 |
| 64 | Benin | 23.6 | Paraguay | 576 | Paraguay | 0.7 | 64 |
| 65 | Iran, Islamic Rep. | 23.4 | Guyana | 551 | Thailand | 0.7 | 65 |
| 66 | Syrian Arab Rep. | 21.7 | Turkey | 513 | Cape Verde | 0.7 | 66 |
| 67 | Senegal | 20.9 | Argentina | 509 | Yugoslavia | 0.6 | 67 |

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| Rank | Trade / pppGDP Ratio [a] | Percent | Per Capita Trade [b] | US $ | Openness Trade/pppGDP ratios adjusted for pppGDP [c] | Ratio | Rank |
|---|---|---|---|---|---|---|---|
| 68 | Zimbabwe | 20.8 | Cote d'Ivoire | 457 | Iran, Islamic Rep. | 0.6 | 68 |
| 69 | Comoros | 20.1 | Colombia | 447 | United States | 0.6 | 69 |
| 70 | Chile | 20.1 | Ecuador | 421 | Senegal | 0.6 | 70 |
| 71 | Poland | 18.6 | Romania | 408 | Syrian Arab Rep. | 0.6 | 71 |
| 72 | Cameroon | 18.4 | Former USSR | 361 | Zimbabwe | 0.6 | 72 |
| 73 | United States | 18.2 | Mauritania | 355 | Chile | 0.5 | 73 |
| 74 | Uruguay | 18.0 | Morocco | 340 | Lesotho | 0.5 | 74 |
| 75 | Cape Verde | 18.0 | Brazil | 336 | Cameroon | 0.5 | 75 |
| 76 | El Salvador | 17.7 | Philippines | 316 | Poland | 0.5 | 76 |
| 77 | Mexico | 17.7 | El Salvador | 315 | Mexico | 0.5 | 77 |
| 78 | South Africa | 17.7 | Lesotho | 296 | Nicaragua | 0.5 | 78 |
| 79 | Nicaragua | 17.4 | Honduras | 293 | El Salvador | 0.5 | 79 |
| 80 | Philippines | 17.2 | Iraq | 291 | Uruguay | 0.5 | 80 |
| 81 | Lesotho | 16.9 | Guatemala | 289 | South Africa | 0.5 | 81 |
| 82 | Sao Tome and The Principe | 16.9 | Nicaragua | 284 | Chad | 0.5 | 82 |
| 83 | Venezuela | 16.6 | Cape Verde | 279 | Philippines | 0.5 | 83 |
| 84 | Morocco | 16.2 | Zimbabwe | 279 | Mali | 0.5 | 84 |
| 85 | Yemen, Rep. | 16.1 | Liberia | 273 | Venezuela | 0.4 | 85 |
| 86 | Chad | 15.8 | Peru | 266 | Burkina Faso | 0.4 | 86 |
| 87 | Ecuador | 15.7 | Cameroon | 265 | Yemen, Rep. | 0.4 | 87 |
| 88 | Mali | 15.7 | Indonesia | 264 | Morocco | 0.4 | 88 |
| 89 | Burkina Faso | 15.3 | Dominican Rep. | 260 | Ecuador | 0.4 | 89 |
| 90 | Bulgaria | 15.0 | Togo | 255 | Malawi | 0.4 | 90 |
| 91 | Turkey | 14.5 | Equatorial Guinea | 252 | Bulgaria | 0.4 | 91 |
| 92 | Bolivia | 14.3 | Gambia, The | 246 | Turkey | 0.4 | 92 |
| 93 | Algeria | 14.1 | Senegal | 239 | Bolivia | 0.4 | 93 |
| 94 | Malawi | 13.9 | Bolivia | 235 | Niger | 0.4 | 94 |
| 95 | Romania | 13.5 | Egypt, Arab Rep. | 231 | Guinea-Bissau | 0.4 | 95 |
| 96 | Guatemala | 13.5 | Yemen, Rep. | 231 | Algeria | 0.4 | 96 |
| 97 | Niger | 13.2 | Benin | 227 | Guatemala | 0.4 | 97 |
| 98 | Argentina | 13.2 | Zambia | 221 | Romania | 0.4 | 98 |
| 99 | Colombia | 12.7 | Sri Lanka | 207 | Argentina | 0.4 | 99 |
| 100 | Indonesia | 12.7 | Sao Tome and The Principe | 186 | Indonesia | 0.4 | 100 |
| 101 | Nigeria | 12.6 | Guinea | 181 | Colombia | 0.3 | 101 |
| 102 | Dominican Rep. | 11.8 | Nigeria | 167 | Nigeria | 0.3 | 102 |
| 103 | Kenya | 11.6 | Ghana | 155 | Central African Rep. | 0.3 | 103 |
| 104 | Peru | 11.6 | Comoros | 131 | Dominican Rep. | 0.3 | 104 |
| 105 | Central African Rep. | 11.0 | Pakistan | 121 | Kenya | 0.3 | 105 |
| 106 | Guinea-Bissau | 10.9 | Kenya | 107 | Peru | 0.3 | 106 |
| 107 | Egypt, Arab Rep. | 10.9 | Central African Rep. | 97 | Tanzania | 0.3 | 107 |
| 108 | Tanzania | 10.9 | Burkina Faso | 88 | Egypt, Arab Rep. | 0.3 | 108 |
| 109 | Sri Lanka | 10.3 | Mali | 85 | Madagascar | 0.3 | 109 |
| 110 | Madagascar | 9.9 | Zaire | 84 | Sri Lanka | 0.3 | 110 |
| 111 | Zaire | 9.6 | Guinea-Bissau | 82 | Zaire | 0.3 | 111 |
| 112 | Ghana | 8.9 | China | 82 | Burundi | 0.3 | 112 |
| 113 | Burundi | 8.5 | Niger | 77 | Ghana | 0.2 | 113 |
| 114 | Uganda | 8.3 | Malawi | 73 | Brazil | 0.2 | 114 |
| 115 | Brazil | 8.2 | Chad | 72 | Sierra Leone | 0.2 | 115 |
| 116 | Sierra Leone | 7.8 | Sierra Leone | 64 | Uganda | 0.2 | 116 |
| 117 | Iraq | 7.8 | Madagascar | 59 | Rwanda | 0.2 | 117 |
| 118 | Ethiopia | 7.8 | Haiti | 57 | Former USSR | 0.2 | 118 |
| 119 | Rwanda | 7.6 | Tanzania | 56 | Ethiopia | 0.2 | 119 |
| 120 | Pakistan | 7.4 | Uganda | 52 | Iraq | 0.2 | 120 |
| 121 | Former USSR | 7.1 | Burundi | 51 | China | 0.2 | 121 |
| 122 | China | 6.8 | Rwanda | 46 | Pakistan | 0.2 | 122 |
| 123 | Haiti | 6.2 | India | 44 | Haiti | 0.2 | 123 |
| 124 | Myanmar | 6.0 | Bangladesh | 44 | Somalia | 0.2 | 124 |
| 125 | Bangladesh | 5.9 | Sudan | 43 | Myanmar | 0.2 | 125 |
| 126 | Somalia | 5.7 | Nepal | 43 | India | 0.2 | 126 |
| 127 | India | 5.6 | Myanmar | 31 | Bangladesh | 0.2 | 127 |
| 128 | Nepal | 4.6 | Somalia | 26 | Nepal | 0.1 | 128 |
| 129 | Sudan | 4.5 | Ethiopia | 23 | Sudan | 0.1 | 129 |

a/ Average for 1990-92.

b/ Average for 1990-92, values in 1987US$.

c/ Adjustment for the size of economy using pppGDP.

Ratio = (actural Trade / pppGDP ratio) / (fitted Trade / pppGDP ratio)

where fitted values are obtained using the following regression:

$$(\text{Trade} / \text{pppGDP}) = a + b \ln(\text{pppGDP}) + c\,(\ln(\text{pppGDP}))^2$$

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