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March 2, 1987

To: Members of the Committee of the Whole  
for the Development Committee

From: The Secretary

Subject: The Long-Term Commodities Problem - Implications for Developing  
Countries

As indicated in EB/CW/DC/87/2 (2/25/87), the attached material on "The Long-Term Commodities Problem - Implications for Developing Countries" has been prepared by the staff of the World Bank. This documentation, including the part on "Non-Fuel Primary Commodity Markets in the 1980s" prepared by the staff of the Fund will be considered by the Committee of the Whole at its meeting scheduled for Wednesday, March 11, 1987.

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# International Bank for Reconstruction and Development

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SecM87-184

FROM: Vice President and Secretary

February 27, 1987

## DEVELOPMENT COMMITTEE MEETING - APRIL 10, 1987

### The Long-Term Commodities Problem: Implications for Developing Countries

1. Attached is a paper entitled "The Long-Term Commodities Problem: Implications for Developing Countries" which is a background paper for consideration by the Development Committee at its April 10, 1987 meeting.
2. The documentation consists of two parts. The first part was prepared by the staff of the World Bank with the collaboration of the staff of the Fund. It examines commodity market prospects in the context of long-term developments and discusses implications for Bank policy; it also provides an assessment of the agricultural policies of industrial countries. The second part, which has been prepared by the staff of the Fund examines in greater detail the causes of the weakness in commodity prices in the first half of the 1980s and the price and earnings implications for the remainder of the decade.
3. This paper will be considered by the Executive Directors meeting as a Committee of the Whole on March 10, 1987.
4. Questions on this document may be referred to Mr. Baneth (ext. 33800).

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THE LONG-TERM COMMODITIES PROBLEM:  
IMPLICATIONS FOR DEVELOPING COUNTRIES

Paper prepared by World Bank Staff for consideration by the Development Committee at its April 1987 meeting.

## CONTENTS

	Page
EXECUTIVE SUMMARY .....	i
1. COMMODITY PRODUCTION, TRADE, AND PRICES .....	1
Recent Trends in Commodity Trade .....	1
Plummeting Prices in the 1980s .....	2
Slow and Uneven Recovery to 2000 .....	6
Production, Consumption, and Trade .....	6
Price Forecasts .....	8
2. THE IMPACT ON DEVELOPING COUNTRIES .....	12
Growth and the Terms of Trade in the 1980s .....	14
How Future Weakness in Commodity Prices May Impair Future Incomes .....	19
3. INDUSTRIAL COUNTRY AGRICULTURAL POLICIES .....	21
Price Supports .....	21
Difficulties in Determining Winners and Losers .....	21
High Economic Costs for Industrial Countries .....	23
The Costs for Developing Countries .....	24
Broader Implications of Agricultural Protection .....	27
Toward Policy Reform .....	28
4. DEVELOPING COUNTRY POLICIES .....	30
How Prices Affect Demand .....	30
All Producers vs. One Producer .....	31
The Commodity Policy Dilemma: Efficient Supply vs. Inelastic Demand .....	32
Domestic Policy: Inefficiencies and Reforms .....	33
Proper Policies for International Competitiveness ...	36
5. ISSUES FOR THE BANK .....	38
Stabilizing Export Earnings .....	38
Lending for Primary Commodity Production .....	41
Lending for Commodities Facing Inelastic Demand .....	42
Commodities in Surplus Supply .....	45
ANNEX TABLES .....	46

## EXECUTIVE SUMMARY

i. Flagging demand, rising supplies, falling prices, and generally deteriorating terms of trade sum up the commodities problem of the developing countries. Nor is there much prospect for a big improvement soon. Only accelerated world economic growth and development could pull prices and producers out of the present deep trough, by raising the growth rate of world demand for commodities and reducing the dependence of developing countries on them.

### Commodity Prices

ii. Between 1980 and 1986 the World Bank index of 33 nonfuel commodity prices plummeted from 100 to 68 in real terms, showing commodity prices at their lowest level since the 1930s. Oil prices also fell, most precipitously in 1986, and recovered only partially. No commodity category -- food or nonfood, agricultural or mineral -- escaped the decline. Prices are expected to fall even further, in both nominal and real terms, in 1987.

iii. The causes of today's depressed commodity markets are complex, but four elements stand out: 1) slow economic growth in the industrial countries, 2) oversupply due to past investment geared to expectations of faster growth and higher real prices, 3) continued reductions in the intensity of using raw materials in production, and 4) market disruptions due to the agricultural policies of industrial countries. Those disruptions were responsible for further unsettling the markets for temperate products, particularly after 1984.

iv. Price (and other) forecasts are subject to great uncertainties. This must be constantly borne in mind. With this proviso, one may note that on the basis of recent analysis by Bank staff, a moderate improvement in commodity prices can only be expected towards the end of the 1980s, as low prices sustain growth in demand while discouraging new supplies. For demand to grow even moderately, however, industrial countries must maintain their economic expansion at least at around 3% a year -- and keep real interest rates low. If these assumptions turn out to be correct, the real prices of nonfuel primary commodities are projected to increase by about 15% over the next fifteen years, with most of the recovery after 1988. Oil prices are expected to increase more rapidly, in real terms, from their trough in 1986. Despite these improvements, both oil and nonfuel commodity prices in the year 2000 would still be lower in real terms than the extremely low prices of 1985.

### Impact on Developing Countries

v. With the developing countries' volume of commodity exports rising by only 11 percent during 1980-86, their real earnings from commodity exports were 20% lower in 1986 than in 1980. For the developing countries still depending heavily on primary commodity exports, this deterioration has made budgetary, debt-servicing, and balance-of-payments difficulties far more severe -- and has greatly complicated their economic reforms. For the major debtors, the fall in commodity prices has forced further reductions in imports

on top of those required by lower external finance and high interest rates. And for Sub-Saharan Africa, it has contributed to the continuing fall in living standards and investment. Not all developing countries were affected equally, however, and some have actually benefited from the decline in real prices of commodities.

vi. Commodity prices are just one of several external factors affecting countries, and differences in domestic policy responses do much to determine how a country performs after any severe external shock. Domestic policies have likewise been important in determining past developments, including the success of diversification, and therefore today's differences in the vulnerability of various countries to swings in primary commodity prices. However, the worsening of terms of trade, consequent to the fall in commodity prices in the 1980s, has clearly had a depressing influence on the economic performance of many primary commodity exporting developing countries.

vii. The Bank's projections for the next 10 to 15 years envision continuing satisfactory growth for several developing countries, particularly in Asia, and a return to growth in many others. By and large these countries have already begun to diversify their production structures and reduce their dependence on primary commodity exports. They have also succeeded in avoiding (or resolving) a debt crisis. In a substantial part of the developing world, however, persistently low primary commodity prices, in combination with high levels of debt, are likely to constrain growth rates well into the 1990s. As a result, despite continued widespread policy improvements, many oil-exporting countries and many Sub-Saharan commodity-dependent countries are not expected to have their per capita incomes exceed their 1980 levels much before the end of the century.

viii. Countries that export manufactures face a better future. The expected 6.5 percent annual growth of their exports is lower than that before 1980, but well above the average for primary exporters. This expectation (like all the others) is nevertheless subject to considerable downside risks. Slower-than-anticipated growth in industrial countries would greatly affect developing country exports of manufactures. Even more threatening is the risk of rising protectionism. But if the industrial countries improve their macroeconomic management, accelerate their growth, and stand together in their dedication to an open world trade environment, they would greatly boost the prospects of developing countries, both exporters of manufactures and commodities.

#### Industrial Country Agricultural Policies

ix. Sustained economic expansion, through policies that also permit low inflation and low interest rates in industrial countries, is the most important factor in the recovery of commodity markets. Rationalization of industrial country agricultural policies could also contribute substantially. The direct trade impact of these policies on developing countries is mixed, but negative overall. More important, in the longer term winners and losers do not balance out. Exporters lose immediately through lower prices, and in the longer term because they cannot develop along the lines of their comparative advantage. Importers benefit, meanwhile, but they cannot count on the continuation of cheap imports. All suffer from the

accompanying uncertainty. The biggest losers, of course, are the industrial countries, through high costs to their consumers and increasingly to their taxpayers, through efficiency losses that reduce the growth potential of their domestic economies, and through the spread of tensions to other areas of trade. These negative effects, in turn, rebound on the developing countries. The industrial countries could thus benefit from more efficient agricultural policies. Such policies would ease the resolution of their fiscal problems and enable more investment and faster growth in production and incomes. They could also boost the imports from developing countries.

x. Another broad effect of the agricultural policies of industrial countries is their bad example. Through pervasive and often haphazard interventions that disrupt world trade and distort relative prices (between both commodities and countries), these policies have a bad influence on the overall trade policies of developing countries. By their example and disruptions, they encourage a mixture of autarky, high protection, and excessive import dependence -- and thus waste national and world resources.

xi. Radical reform may not come soon. Even so, the rising economic and direct budgetary costs of today's agricultural policies -- and the political strains they cause among the major industrial countries -- provide powerful arguments for improving policies fast. These improvements, to be politically acceptable, must provide some appropriate protection to the incomes of farming families. The large efficiency gains from freer trade and better distribution of world agricultural production, more in accord with true comparative advantage, would facilitate the direct subsidization of farm incomes where necessary and at the same time benefit all parties concerned, including the developing countries.

xii. Unilateral changes would be in each country's interest, but if these are not politically practical, durable multilateral solutions should be negotiated soon. Macroeconomic policies conducive to an acceleration of world growth above what is now projected would provide a propitious environment for such multilateral negotiating efforts. In turn, the successful conclusion of the agricultural trade negotiations would help accelerate world growth and greatly benefit the developing countries.

#### Developing Country Commodity Policies

xiii. The demand for primary commodities is known to be income-inelastic and price-inelastic: that is, it grows slower than overall incomes and is relatively unresponsive to price changes. Faster growth of commodity production thus normally leads to slower growth of export revenue. This relationship highlights an apparent paradox in striving for more investment and faster growth in commodity production, particularly as prices are depressed and expected to remain so. Should the developing countries then try to maximize their export revenues by restraining, rather than trying to raise, their production and exports of primary commodities? This question is the essence of the commodity policy dilemma.

xiv. The answer is a qualified "no." The bulk of primary production in developing countries is food for the domestic market. It is clearly in the interest of every country that its agriculture efficiently meet the demands of its domestic consumers. In addition, no matter how price-inelastic the demand is for commodities in general, the producers of individual commodities rarely face inelastic demand over the long run -- and any subgroup of producers of a commodity more rarely still. Furthermore, developing country policies that discriminate against primary commodities, principally agriculture, often are also aimed at fostering industrialization through import substitution. Such policies, because of their adverse impact on productivity growth and their disincentives to all export activities, frequently end up stifling industrial progress and hence growth, development, and diversification as well.

xv. For some countries and products, over some range of prices, constraints on production may be justifiable for some time. For example, a country that has a large share of a demand-inelastic product and expects a bumper crop may rationally pay some farmers to produce less, or tax them to achieve the same goal. Although efforts to maintain artificially high prices are bound to fail over the long term, it may be possible for some country or countries to avoid large declines in export revenues in the short or medium term by taking appropriate supply actions. The greatest difficulty in such endeavors is distinguishing short-term fluctuations from longer trends.

xvi. In the long term, however, the emphasis should be on efficiency -- and on providing balanced incentives to all sectors, incentives reflecting present and expected market prices. Increasing the efficiency of agricultural and mining production does not necessarily mean a generalized production push. Part of the return to more efficient resource allocation may well be the freeing of resources for use in other sectors.

xvii. This improved allocation of resources would help accelerate growth and development. Development includes sectoral shifts -- away from primary sectors to industry and services -- and thus reduces the vulnerability of developing countries to depressed or fluctuating earnings from commodity exports. Meanwhile, development also raises the demand for primary commodities in developing countries, already the fastest growing segment of world demand. In short: accelerated development provides the only long-term solution to the commodities problem.

#### Commodities and the Bank

xviii. One immediate difficulty of developing countries highly dependent on primary commodity exports is the potential for large shortfalls in revenue -- the result of sudden demand or supply changes owing, say, to the weather or the business cycle in industrial countries. The International Monetary Fund provides financing for countries suffering such temporary shortfalls through its Compensatory Financing Facility (CFF). And with its Buffer Stock Financing Facility, the Fund also supports the participation of countries in international commodity agreements aimed at stabilizing prices of primary products. The European Economic Community, too, has a commodity-specific compensatory financing scheme -- STABEX -- for a number of associated developing countries.

xix. For the Bank, variations in the export earnings of its developing member countries have also been a matter of concern. On the whole, however, the Bank's actions have aimed not at directly offsetting these variations but at attacking some of their causes. These actions have consisted mostly of the overall promotion of development through policy dialogues and investment financing -- with the recognition that diversification reduces both the variability of export earnings and the vulnerability to it. The Bank has also financed projects that directly reduce variability, particularly that of supplies.

xx. Since 1969 the Bank has had a formal policy of cooperation with commodity agreements enjoying broad international support. Since 1973 it has also promulgated investment policy guidelines for commodities facing inelastic demand over the long run. For such commodities, when developing countries dominate in their exports but are relatively unimportant in their imports, Bank financing is to be limited to rehabilitation or modernization involving no increase in production. Only countries truly lacking acceptable investment alternatives are to be exceptions. These policies have in different degrees affected tea, sugar, cocoa, and coffee. The Bank is, of course, keeping the application of these policy guidelines to specific countries and commodities under review as market conditions change.

xxi. Some have questioned the impact of the Bank's (and the IMF's) policy advice, project lending, and other forms of financing for commodities in surplus supply. When it comes to new investment, the impact of present and projected supplies on prices must obviously be considered, as is indeed routine. But it would not make sense to refrain from financing low-cost projects in developing countries merely because they compete with higher-cost production elsewhere. The entry of new producers adds to the overall competitiveness of primary commodities. Their entry is also part of the overall development process that reduces the dependence on primary commodities and raises the demand for them. Commodity-specific actions, though sometimes helpful, are thus hardly ever of long-lasting critical importance. And it is only through the acceleration of global growth and of broad-based development that the commodity problem can be solved.



## 1. COMMODITY PRODUCTION, TRADE, AND PRICES

1.1 Flagging demand, rising supplies, falling prices, and generally deteriorating terms of trade sum up the commodities problem in developing countries. 1/ Recent events have brought nonfuel commodity prices in real terms to their lowest level in at least fifty years -- and petroleum prices to their lowest level in more than a decade. 2/ Prices should recover in the 1990s, but not much above their most recent and most depressed levels.

1.2 These events and prospects compound the budgetary, debt-servicing, and balance-of-payments difficulties of developing countries and complicate their economic management. The experience of the past few years is quite telling. African countries have been hit particularly hard. In addition to facing declining nonfuel commodity prices, they lost shares in their main commodity markets. Other countries, especially in Latin America, had to face sharply falling food and metal prices, at a time when debt service obligations required current accounts to be in surplus. Oil-dependent countries everywhere faced revenue problems, most severely in 1986. By and large, however, the commodity crisis of the early 1980s hurt most of the developing countries.

1.3 The decline in prices is the most critical aspect of the commodities problem today, and the one this paper focuses on. Another aspect is the persistent instability of prices and export earnings of commodity-dependent developing countries. The fall and rise of petroleum prices in the last year show how dramatic this instability can be -- as do the sharp movements in the prices of other important commodities, like coffee. Even so, instability now appears to be a subsidiary problem because its importance is overwhelmed by the all-too-painful downward trend around which these fluctuations occur. Moreover, mechanisms can be devised, and have indeed been put in place, to help deflect or absorb the shocks of temporary fluctuations, making more lasting trends in prices and export revenue the greater concern.

### Recent Trends in Commodity Trade

1.4 World trade in nonfuel primary commodities grew on average at 3.8 percent a year during the 1970s but only at 1.1 percent a year during the first half of the 1980s. Food trade grew fastest during both periods -- 4.7 percent a year during the 1970s and 2.1 percent a year during the early 1980s. Underlying this growth were the rising imports of cereals and vegetable fats and oils by oil producers, newly industrializing countries, and the USSR and other Eastern European economies.

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1/ A detailed, commodity-by-commodity discussion of past and future short-term fluctuations and trends is in the five volumes of Report EC814/86, "Price Prospects for Major Primary Commodities", distributed to the Bank's Executive Directors under SecM86-135 of 16 December 1986.

2/ The companion paper submitted by the Fund discusses in more detail the causes of the present weakness in commodity prices and the price and earning implications for the remainder of the decade.

1.5 The developing countries' share in the exports of nonfuel primary commodities declined in the 1970s and early 1980s, as the growth of their domestic consumption of primary commodities, at 3.5 percent a year after 1970, much outpaced that of industrial countries (0.7 percent) and Eastern Europe (1.9 percent). Food exports (mainly grains, meals, and vegetable oils) accounted for much of the decline -- for three main reasons. First, the production of food in developing countries has lagged behind the rapid rise of home consumption. Second, many industrial countries have been closing their domestic food markets to imports and dumping excess domestic supplies onto the international market. Third, policies in many developing countries have discriminated against exports, reducing the production of established export commodities and discouraging the introduction of new ones.

1.6 Increased domestic processing of some raw materials (like timber and hides and skins) in developing countries also trimmed their export in unprocessed form, while often raising exports of manufactures. And some commodities (like jute, cotton, and rubber) have suffered from a continued rise in competition from synthetic substitutes.

#### Plummeting Prices in the 1980s

1.7 The dollar prices of primary commodities fell dramatically during the first half of the 1980s -- in absolute terms and relative to the prices of manufactures (Table 1.1 and Figure 1.1). Between 1980 and 1986, the average dollar price of developing country nonfuel primary exports fell by 26 percent (by 37 percent relative to the price of developing country manufactured imports), and that of oil dropped by 55 percent. During 1980-84 the appreciation of the dollar explained part of the decline in the dollar prices of commodities, and mitigated it relative to manufactures. The decline through 1986, on the other hand, occurred in the face of a depreciating dollar, and the drop in real terms was correspondingly greater. The dollar price of commodities continued to decline at a time when the dollar price of manufactures rose, partly because of the depreciation of the U.S. currency. Particularly in 1984-86 the fall in commodity prices resulted from a combination of unusually large increases in supplies and sharply decelerating demand growth, the latter the result of slow growth in world incomes. Important contributing factors were the reduction of loan rates for cereals, soybeans and cotton that occurred in the United States under the 1985 U.S. Farm Bill, and the export subsidy war between the United States and the EEC in grains and related commodities that followed the U.S. attempt to regain export market shares in these products.

1.8 Economic activity in the industrial countries continues to be a major, and frequently the main, determinant of the cyclical movements in aggregate commodity prices. This is particularly true for metals and agricultural raw materials, whose demand is quite responsive to changes in the rate of industrial activity. The sluggish recovery of Western European countries (which account for about half the world imports of nonfuel primary commodities) helps to explain the slow growth in consumption of commodities in

Table 1.1: PRICE AND VOLUME INDICES OF DEVELOPING COUNTRIES' EXPORTS

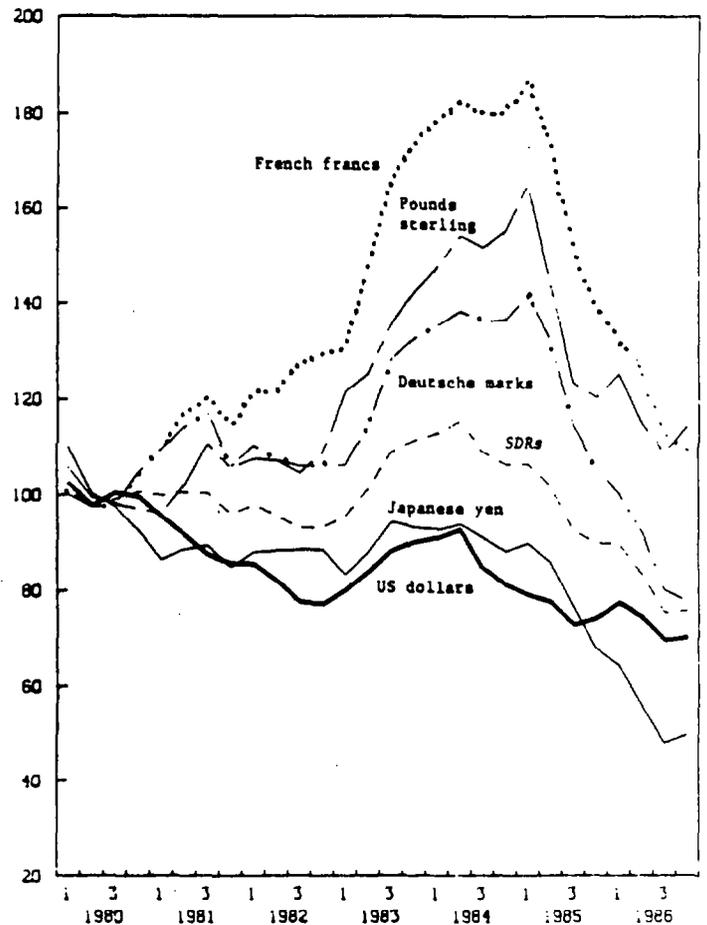
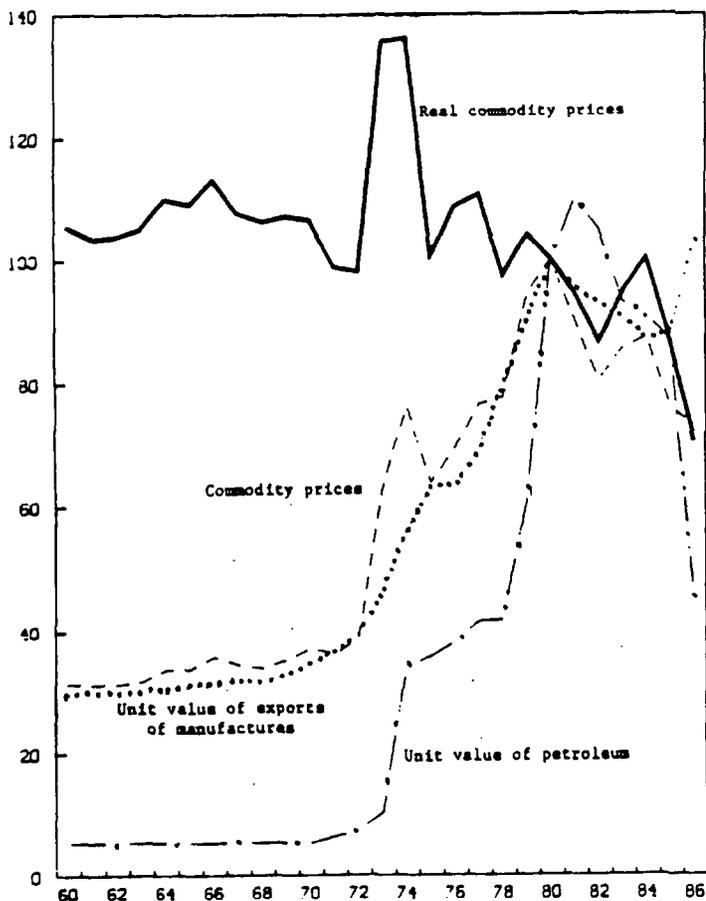
(1980=100)

	1965	1973	1980	1984	1986	Projected 1995
<u>Price Indices</u> (current dollars)						
Oil	5	9	100	90	45	82
Nonoil Commodities	34	55	100	83	74	101
Manufactures	30	46	100	95	114	138
<u>Volume Indices</u>						
Merchandise Exports	53	80	100	120	126	199
Manufactures	17	43	100	146	157	299
Nonfuel Primary	59	72	100	107	111	150
Food	58	69	100	110	110	155
Nonfood Agriculture	76	93	100	107	110	111
Metals and Minerals	42	58	100	99	112	176
Fuels	94	134	100	100	101	122

Source: Economic Analysis and Projections Department, World Bank.

FIGURE 1.1: COMMODITY PRICE TRENDS, 1960-86

In US dollars (1980=100) In SDRs and five currencies



Source: International Monetary Fund.

1983-84. Demand for food and beverages, on the other hand, is rather irresponsive to rises in income in the short run, while supplies of agricultural commodities, susceptible to the vagaries of weather, are more unstable than metal supplies. These characteristics help explain why metal prices, affected primarily by demand factors, fell by only 6 percent in 1985. In the same year the prices of agricultural raw materials, influenced by demand shortfalls and supply increases, fell by 17 percent, and food and beverage prices declined by 12 percent under the influence of rising supplies.

1.9 On trend, however, world consumption of metals changed little between 1980 and 1986, while industrial production increased by more than 10 percent. This divergence has led some analysts to speculate about a fundamental structural change in the 1980s in the demand for some groups of primary commodities. In the industrial countries, a declining trend in the intensity of use of raw materials has been evident for several years. In recent times, this decline may have accelerated somewhat, particularly for metals (Figure 1.2). But this accelerated decline, rather than reflecting any permanent change in existing trends, more likely reflects the changed composition of GDP (in particular, the reduced share of investment) and a temporary reaction to earlier relative price changes. That reaction redirected research and development toward material-conserving technologies and substitute products. The complementarity of fuels and raw materials in some uses enhanced these tendencies. After the fall in prices of raw materials, particularly crude oil, the intensity of use of raw materials in industrial countries should continue to decline, but at a slower pace.

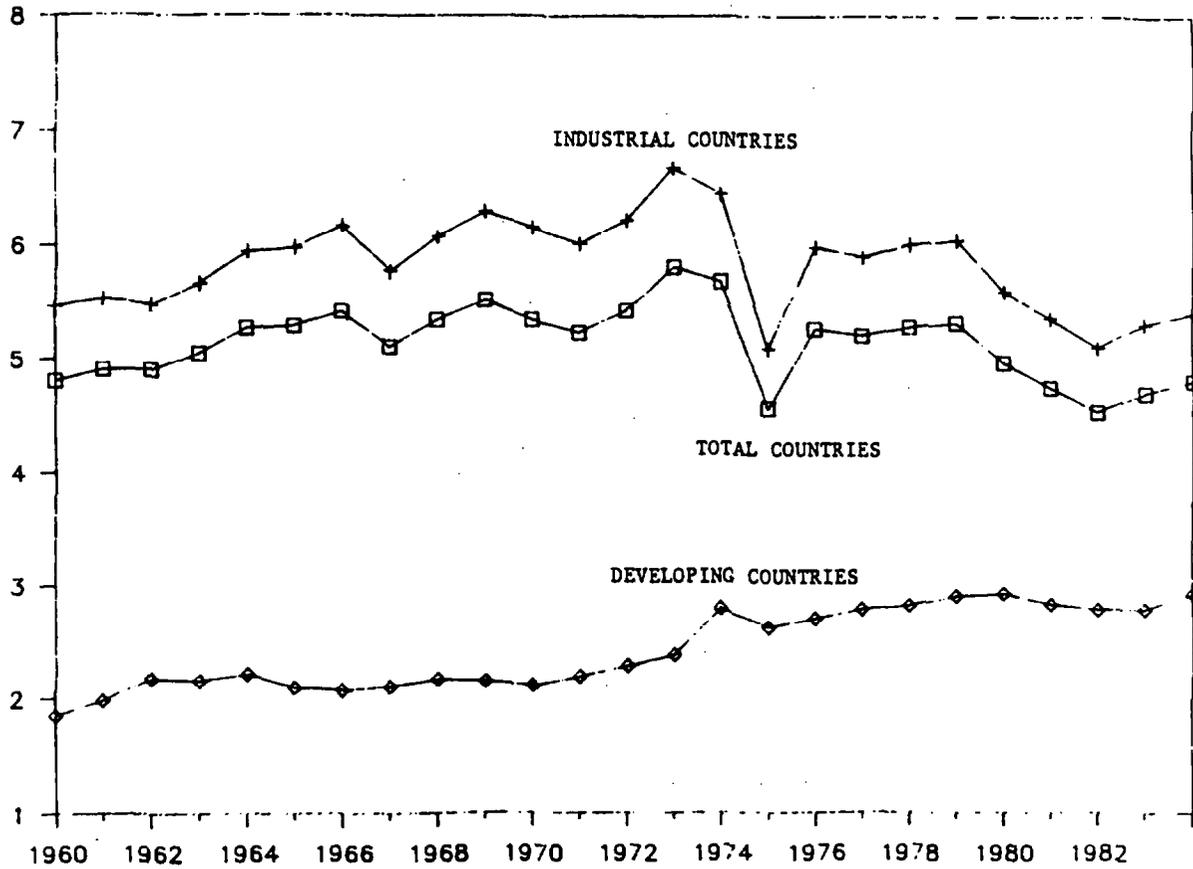
1.10 As previously mentioned, the main cause of the fall in food prices during 1984-86 was a substantial increase in supplies. Food production increased by an extraordinary 8 percent in 1984, and stocks rose by 22 percent. In the ensuing two years, world food production rose by about 2 percent a year; stocks responded to the weak demand by increasing 23 percent in 1985 and 13 percent in 1986. A similar supply increase (by about 8 percent in 1984, with cotton production alone increasing 29 percent) caused the prices of agricultural raw materials to fall by 15 percent during 1984-86. Changes in U.S. farm policy threatened a substantial release of stocks and contributed to these price declines in 1986.

1.11 The unusually large increases in supplies across a broad range of agricultural commodities suggest some common causes. They include the generally favorable weather conditions during the period and a substantial fall in the real price of fertilizers. The lagged response to earlier price peaks also contributed: annual crops such as grains, soybeans, and cotton were responding to the run-up in prices in 1983-84 due to the U.S. Payment-in-Kind Program and the U.S. drought. <sup>1/</sup> Perennial crops were still partly responding to the high prices of the late 1970s. Furthermore, prices remained

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<sup>1/</sup> The U.S. government introduced the Payment-in-Kind Program in 1983 as a supply-control scheme to reduce grain production. It required farmers to idle cropland in exchange for grains from reserves, a payment in kind.

FIGURE 1.2: METALS INTENSITY OF GDP, 1960-84 /A



/A Metals intensity is calculated as the value of nonferrous metals consumption at 1979-81 prices per \$1,000 of GDP in constant 1980 dollars.

Source: Economic Analysis and Projections Department, World Bank.

high in local currency in many producing countries through most of 1985, as the dollar remained very high until September that year. In many developing countries, the relative prices of agricultural products have remained high because of better pricing policies and because their currencies have fallen with the dollar or even faster since 1985.

1.12 The petroleum market, if with some delay, was affected by many of the same market factors that caused nonfuel commodity prices to decline in 1985 and 1986. Declining demand made it increasingly difficult for OPEC to remain as the residual supplier of oil in world markets. In 1985 the market economies' demand for oil fell by 300,000 barrels a day. The market imbalance in these years -- with non-OPEC supplies increasing and demand falling -- precipitated a dramatic decline in oil prices. At the end of 1985, OPEC was forced to abandon its policy of trying to control production, and it opted for a larger market share. Petroleum prices went from an average of \$27 a barrel in 1985 to less than \$10 a barrel in April 1986. They have since recovered to about \$17 a barrel.

#### Slow and Uneven Recovery to 2000

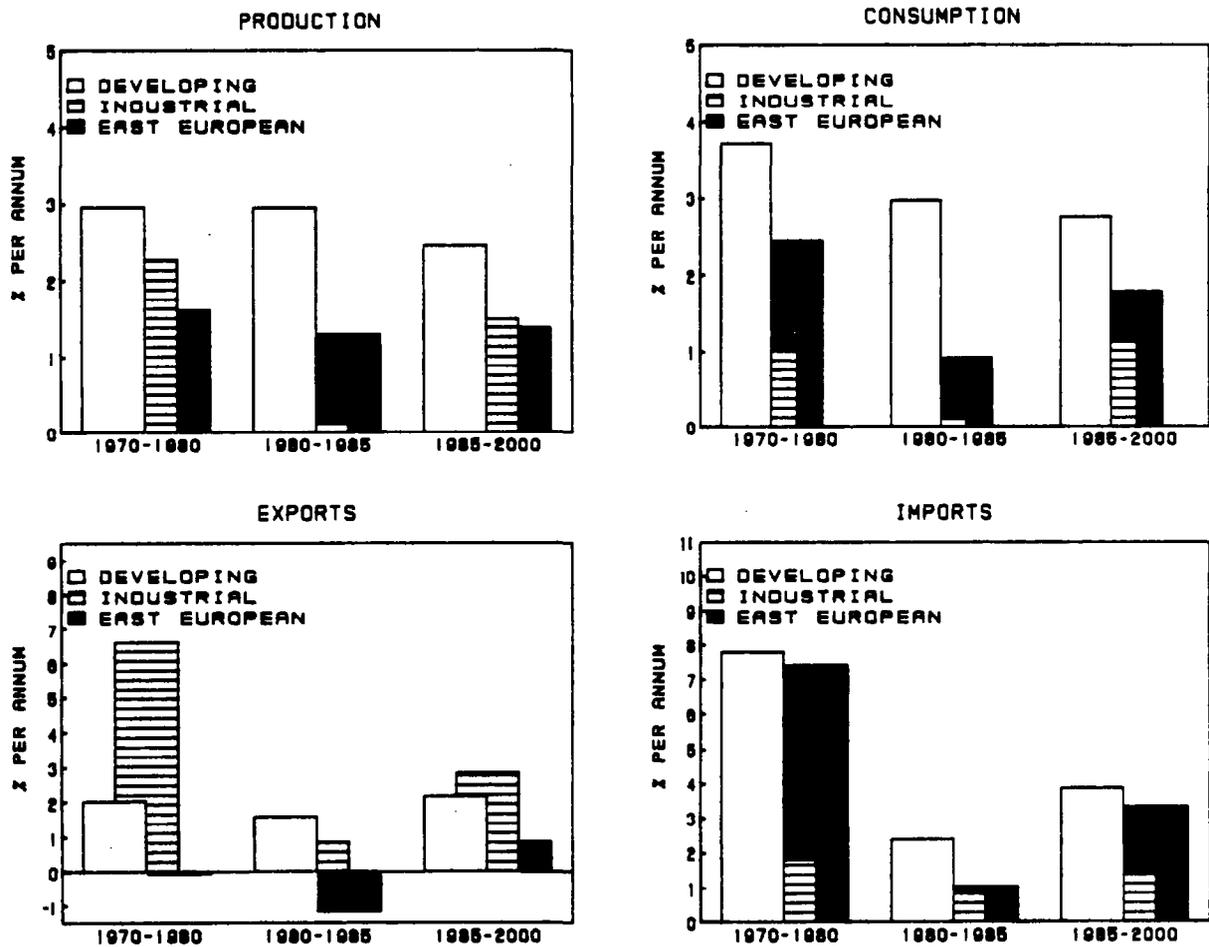
1.13 The factors affecting primary commodity prices are expected to improve only gradually and modestly in the next few years. Economic growth in the industrial countries is expected to be on trend at somewhat less than 3 percent a year, with inflation staying low (about 4 percent a year in local currencies). Interest rates in real terms are expected to decline slightly from current levels. <sup>1/</sup> In these conditions, and with population growth also slowing down, the most important factor influencing agricultural prices, particularly foodstuffs, will continue to be supply. The long uninterrupted period of generally favorable weather is unlikely to continue. Production should also decline in response to the present low world prices, though the overall response will depend in large part on price support policies in producing countries. With stable (albeit slow) economic growth and declining supplies, real prices should increase somewhat above their current very depressed levels, but no substantial recovery is expected in the next 10-15 years.

1.14 Production, consumption, and trade. Relative to the 1970s, the growth of world production, consumption, and trade of the major nonfuel primary commodities is projected to remain slow in the period to 2000, but it will be faster than in recent years (Figure 1.3). The volume of production is projected to grow 36 percent over the next 15 years -- compared with 41 percent over the last 15. In agriculture, Green Revolution technology, now 20 years old, has been adopted widely, and further diffusion will be slower. More broadly, continued low prices and in some cases large stocks -- grain stocks are 22 percent of world use, nearly twice the average of the 1970s -- will dampen the growth of production in the major exporting countries.

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<sup>1/</sup> The details of the macroeconomic assumptions made to forecast commodity price trends are in Appendix Table A.13.

FIGURE 1.3: GROWTH IN PRODUCTION, CONSUMPTION, EXPORTS, AND IMPORTS OF NON-FUEL PRIMARY COMMODITIES BY COUNTRY GROUPS, 1970-2000



SOURCE: ECONOMIC ANALYSIS AND PROJECTIONS DEPARTMENT, WORLD BANK

1.15 World consumption of nonfuel primary commodities is projected to grow 2.1 percent a year during 1985-2000 -- compared with the 1.6 percent in the early 1980s and 2.5 percent in the 1970s. Accounting for these trends are slower population growth and economic growth that (while faster than in the early 1980s) is expected to remain much slower than in the 1970s. Consumption growth in developing countries is projected to slow down in all categories (food, agricultural raw materials, and metals and minerals) from an overall growth rate of 3.7 percent in the 1970s and 3 percent in the early 1980s to 2.8 percent during 1985-2000. In the industrial countries, primary commodity consumption is projected to grow somewhat more rapidly over the next 15 years than in the early 1980s -- at 1.1 percent a year, a rate comparable to the 1970s. This growth will be concentrated in food. The growth rate of consumption of agricultural raw materials will continue to decline but more slowly. Metals and minerals consumption will continue to increase but at the slower pace of the recent past.

1.16 World trade in nonfuel primary commodities is projected to grow 2.4 percent a year during the next 15 years -- compared with 3.8 percent during the 1970s and 1.1 percent during the early 1980s. The growth in food is expected to average 3.2 percent a year over the forecast period. During the 1970s, food trade grew mostly because of cereal and soybean imports by oil exporters, newly industrializing countries, and Eastern European countries. The growth in their imports is now projected to slow due to slower economic growth. Trade in metals and minerals grew at an average of 3.2 percent a year during the 1970s and 0.7 percent during the early 1980s. It is projected to grow at 1.3 percent a year during the next 15 years. Trade in agricultural raw materials should also grow slowly, at about 1.1 percent a year over the next 15 years.

1.17 Developing countries are projected to increase their global share of total energy consumption to 31 percent by 2000 (from 24 percent in 1984), while the share of industrial countries will decline to 45 percent (from 51 percent in 1984). These changes primarily reflect different rates of economic growth. But gains in energy efficiency and the resulting decline in energy intensity are also expected to be greater in industrial countries. The consumption share of the Eastern European economies is projected to decline slightly. There is likely to be little change in either the direction or configuration of trade in energy commodities. Industrial countries will remain net importers of all fuels. Their dependence on imports is projected to increase from 25 percent of total energy consumption in 1984 to 27 percent in 2000. Nonoil developing countries will become somewhat less dependent on energy imports as they develop their reserves. Although petroleum will continue to be the dominant traded fuel, its share in global energy exchanges is expected to decline from 79 percent in 1984 to 73 percent in 2000.

1.18 Price forecasts. Over the next 15 years, the prices of nonfuel commodities are expected to recover somewhat relative to the prices of manufactures. From 1986 to 2000 nonfuel commodity prices are projected to rise by 15 percent in real terms (Table 1.2). But because 1986 was a record low in commodity prices, their future path can be better characterized by noting that prices expected in the year 2000 will still be 4 percent below

TABLE 1.2: WEIGHTED INDEX OF COMMODITY PRICES, 1948-2000 /A  
(CONSTANT DOLLARS)  
(1979-81=100)

(WEIGHTS- % SHARE) /B	ANNUAL AVERAGES										
	PETROLEUM	33 COMMODITIES (EXCLUDING ENERGY) (100.0)	TOTAL (67.7)	AGRICULTURE					NON-FOOD (14.4)	TIMBER (5.2)	METALS & MINERALS (27.1)
				TOTAL (53.2)	BEVERAGES (22.3)	CEREALS (9.4)	FATS & OILS (9.3)	OTHER (12.3)			
1948	30	112	124	119	86	154	189	101	140	43	97
1949	26	113	121	119	100	163	148	100	129	47	105
1950	26	150	168	152	147	178	177	122	228	57	122
1951	23	156	172	146	141	166	182	111	271	72	132
1952	22	138	140	130	128	157	147	98	179	52	148
1953	24	132	136	134	134	161	151	100	142	48	137
1954	26	145	155	158	195	154	143	104	144	68	134
1955	25	140	142	133	152	133	130	103	173	53	154
1956	24	138	138	134	154	130	129	103	153	50	155
1957	24	128	131	128	138	121	128	114	145	47	136
1958	22	118	120	117	123	121	118	99	131	44	126
1959	20	117	120	111	110	117	128	95	152	53	124
1960	18	116	117	106	105	109	120	96	157	57	124
1961	18	110	109	103	97	115	124	89	131	58	120
1962	17	107	107	101	91	125	114	91	129	62	115
1963	17	111	113	110	92	127	122	122	121	62	114
1964	15	117	114	112	103	124	123	111	121	52	137
1965	15	119	109	107	98	120	136	91	117	59	155
1966	15	119	107	105	93	131	128	89	115	60	160
1967	15	111	105	104	89	137	120	92	108	64	134
1968	15	112	105	102	89	134	115	93	113	66	138
1969	14	113	104	101	88	127	108	98	115	60	144
1970	13	111	103	103	96	109	121	97	101	60	142
1971	16	98	94	93	80	100	116	94	97	58	117
1972	17	94	92	93	80	97	104	103	91	53	106
1973	20	124	124	124	88	170	185	107	124	79	133
1974	69	134	135	140	83	202	172	173	114	78	144
1975	61	101	100	103	71	142	104	129	89	53	113
1976	64	112	116	117	134	115	110	95	111	70	110
1977	64	123	134	143	205	96	124	78	102	74	103
1978	56	101	108	111	132	100	112	79	97	68	92
1979	71	105	106	106	121	92	114	86	102	104	103
1980	107	105	104	104	99	101	96	121	106	110	105
1981	119	91	91	90	82	107	92	92	92	87	92
1982	109	82	81	81	85	79	76	79	82	88	83
1983	102	89	89	88	88	87	92	85	95	84	88
1984	101	92	94	95	104	85	110	77	90	99	85
1985	98	81	81	83	95	74	76	74	74	80	79
1986	42	68	71	74	97	54	50	66	57	73	61
1987	49	64	64	65	77	48	49	69	62	78	61
1988	51	63	64	65	74	51	52	68	62	77	59
1989	50	65	66	67	73	57	56	70	63	75	61
1990	51	70	71	72	78	64	61	75	69	81	65
1995	63	76	77	75	80	65	69	78	83	84	74
2000	90	78	78	77	84	67	66	79	84	91	76

/A COMPUTED FROM UNROUNDED DATA AND DEFLATED BY MANUFACTURING UNIT VALUE (MUJ) INDEX.

/B WEIGHTED BY 1979-1981 DEVELOPING COUNTRIES' EXPORT VALUES.

NOTE: THE COMMODITIES INCLUDED IN EACH GROUP ARE: BEVERAGES—COFFEE, COCOA, TEA; CEREALS—MAIZE, RICE, WHEAT, GRAIN SORGHUM; FATS AND OILS—PALM OIL, COCONUT OIL, GROUNDNUT OIL, SOYBEANS, COPRA, GROUNDNUT MEAL, SOYBEAN MEAL; OTHER FOODS—SUGAR, BEEF, BANANAS, ORANGES; NON-FOODS—COTTON, JUTE, RUBBER, TOBACCO; TIMBER—LOGS; METALS AND MINERALS—COPPER, TIN, NICKEL, BAUXITE, ALUMINUM, IRON ORE, LEAD, ZINC, PHOSPHATE ROCK.

their 1985 level. In a broader historical perspective, they will still be lower than in any postwar year before 1985, and as much as 25 percent below their 1980 level.

1.19 Following their recent recovery, oil prices in real terms are expected to reach levels comparable to those of the mid-1970s around 1995 and to exceed them thereafter. From 1986 to 2000, the price of oil relative to manufactures would more than double, but it would remain 8 percent below the level of 1985, and more than 25 percent below that of 1980. This would leave it well above its pre-1973 level. Thus, relative to their 1985 levels, oil and nonfuel commodity prices are henceforth expected to follow very similar paths (relative to 1987, oil prices would rise a little faster).

1.20 Needless to say all these forecasts are subject to considerable uncertainty. Price forecasts, in particular, are notoriously difficult to make and even in the best of circumstances are highly dependent on the assumptions about future income and population growth, inflation and exchange rate developments, and policies in the major producing and consuming areas. Prices, moreover, are also subject to year to year variations because of economic cycles, the vagaries of weather and other short-term changes. The forecasts should thus be taken only as highly conditional and at best as representative of trends expected on the basis of current and foreseeable policies. These policies themselves can change in light of information, including information on the consequences of policies, provided by analysis and projections. Indeed, helping to bring about desirable policy changes is one of the main objectives of projections.

1.21 Some of the factors accounting for the projected price developments are specific to one commodity. The expected fall in coffee prices is a good example of commodity-specific price expectations. Other factors, however, are more general, including 1) the expected recovery in economic activity, particularly in the developing countries, leading to improved demand for foodstuffs, primarily grains; 2) a reduction of the excess stocks in many markets; and 3) the impact of the 1985 US farm bill (Food Security Act) and other government interventions.

1.22 Investment cycles play a significant role in price formation. For instance, with coffee prices booming in 1985-86, it is expected that plantings would increase, leading to downward pressure on prices in the early 1990s, which would in turn slow the growth rate of new plantings or replantings. The reverse is expected in the cocoa industry. Cocoa prices have recently been declining, which should hold back new plantings and lead to an increase in cocoa prices in real terms in the 1990s. Investment cycles are also important in the derivation of fertilizer prices. Now depressed fertilizer prices are expected to lead to peak prices and investment in the mid-1990s, which would then be followed by another cyclical low in prices.

1.23 The mid-1980s appear to be a trough for the price-investment cycle in metals and minerals. The investment boom of the 1970s led to overcapacity, much of which became productive at about the time of the 1981-82 recession. With demand now projected to grow slowly in most cases, this overcapacity will

weigh heavily on the markets for some time. Some capacity reductions have already been made, and more are to come -- and production costs have been much reduced. In the near term, metals prices could run up due to increased demand, but they are unlikely to stay up very long given the idle capacity that can be brought back into production. With time, however, such reactivation will become increasingly difficult, and a sustained increase in prices will probably be needed to spur investment in the 1990s.

1.24 For cotton, the market balance will permanently improve only when the very large stocks now held by China and the United States are worked off. For natural rubber, faster economic growth, especially in the developing countries, and increased automobile use in all countries should push up demand and prices during 1990-95. The likelihood of slower expansion and slower yield improvements in natural rubber production reinforces the prospect of increasing rubber prices in real terms.

1.25 For petroleum, it remains to be seen whether OPEC members can maintain a long-lasting, production-restraining agreement and so influence prices. Most likely, OPEC should maintain some market influence and, building on the recent compromise, sustain a minimum of production control in the next few years -- when market conditions are likely to continue to exercise pressure on OPEC countries collectively to produce at far less than full capacity. Such influence from OPEC might aim at holding market prices in the \$16-18 a barrel range until about 1990. That would allow for a pickup in the global demand for oil (mainly by impeding the further erosion of residual fuel oil's share in the under-the-boiler market) and foster some increase in other industrial and private uses. Thereafter, as the demand for OPEC oil approaches the member countries' preferred level of production, petroleum prices might increase more markedly.

## 2. THE IMPACT ON DEVELOPING COUNTRIES

2.1 Most developing countries still depend heavily on earnings from primary production. Although they have substantially increased their production and exports of manufactures in the past 30 years, primary goods (including oil) still made up about half their merchandise exports and just over a third of their imports in 1985. <sup>1/</sup> The fall in primary commodity prices relative to those of manufactures over the past six years thus greatly worsened the developing countries' terms of trade. <sup>2/</sup> It reduced the amount of resources available for investment and contributed to the reduction of the growth rates of real output and per capita income in the first half of the 1980s (Table 2.1). The relative weight of external factors on the economic performance of countries is notoriously difficult to isolate; it depends on the underlying economic structures, which in turn depend to a considerable extent on past policy choices. Yet, the decline in commodity prices in the 1980s clearly complicated the already severe adjustment problems of many developing countries and significantly hurt their economic performance.

2.2 Depending on their export and import structures, different groups of developing countries experienced different terms-of-trade changes, in the first half of the 1980s. The tables in this chapter depict these changes, and the evolution of a few other economic variables. Both the terms of trade changes themselves and reactions to them differ according to countries country groups. Contributing to these differences were their policy responses. For example, some highly indebted countries, already pinched by scarce external finance and high interest rates, suffered a terms-of-trade loss that came on top of slow growth in the demand for some of their commodity exports. They were forced to reduce their imports drastically, and productive investments suffered greatly. Only a few of them succeeded in coping effectively with these unfavorable external changes by switching production toward the more dynamic components of external demand and by better using their existing production capacity. Oil-exporting developing countries started out the decade with relatively high levels of income and spending. Some of them had borrowed heavily and were squeezed both by the reversal of private financial flows and the decline of oil prices (and in many cases export volumes) from

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<sup>1/</sup> For purposes of the discussion, countries have been grouped mostly according to their principal exports. However, we have also shown separately highly indebted countries and Sub-Saharan African countries; these categories partly overlap with the export groupings. For example, a "highly indebted country" may also be an "oil exporter" in Sub-Saharan Africa. The structure of exports and imports of the various group of developing countries examined in this section and country classifications are shown in Appendix Tables A.20, A.21 and A.22.

<sup>2/</sup> Unless otherwise specified, terms of trade here means the ratio of the price of exports to the price of imports (technically referred to as commodity or barter terms of trade).

Table 2.1: NINETY DEVELOPING COUNTRIES: SELECTED INDICATORS  
OF THE EFFECTS OF PRICES ON INCOMES, 1973-95

(percentage changes per annum)

	1973-80	1980-84	Estimate 1984-86	Projection 1986-95
<u>Oil-exporting developing countries</u>				
Terms of trade	10	-2	-24	3
Purchasing power of exports	9	-2	-24	6
Income per capita	5	-3	-6	2
<u>Nonfuel primary exporters</u>				
Terms of trade	-3	-2	-1	0.3
Purchasing power of exports	4	1	0	5
Income per capita	1	-2	0	2
<u>Exporters of manufactures</u>				
Terms of trade	-3	1	5	-1
Purchasing power of exports	7	10	10	6
Income per capita	4	3	6	4
<u>Ninety developing countries (aggregate of above 3 groups)</u>				
Terms of trade	2	-1	-3	0.3
Purchasing power of exports	6	4	0	6
Income per capita	3	1	2	3
<u>Selected other groups:</u>				
<u>Highly indebted countries</u>				
Terms of trade	4	-1	-8	1
Purchasing power of exports	5	0	-7	6
Income per capita	3	-4	0	3
<u>Sub-Saharan Africa</u>				
Terms of trade	5	-2	-15	1
Purchasing power of exports	5	-9	-11	4
Income per capita	1	-5	-6	1

Sources and definitions: See Appendix Tables A.14 to A.21.

the peaks reached in 1981. Then, in 1986, oil prices fell dramatically, and sharp domestic adjustment had to come suddenly and forcefully. Many Sub-Saharan African countries suffered terms-of-trade losses on top of weak agricultural growth, caused in part by bad weather in some years and in part by inappropriate policies. For them, structural adjustment efforts became immensely more difficult, and their economic performance was particularly poor, with a severe fall in already low living standards and investment levels.

### Growth and the Terms of Trade in the 1980s

2.3 The relationship between the output of a primary-producing country and its terms of trade varies. For example, high output (relative to its long-term trend) may be associated with adverse terms of trade if both are the result of a currency devaluation (which increases the domestic profitability of exports), or if the high output reflects an outward shift of commodity supply, say through a fall in the cost of production. Conversely, low output may be associated with adverse terms of trade if both are the result of low external demand. This second relationship seems to have predominated during the 1980s.

2.4 Even in this type of situation, the overall impact on developing countries depends on the macroeconomic causes of the low external demand. For instance, if weak demand in the industrial countries is the result of increased savings, its overall impact on developing countries may be attenuated by the increased availability and reduced cost of external capital. But in the 1980s low demand in industrial countries was combined with high interest rates and a scarcity of voluntary private lending to developing countries. Higher debt service and lower external finance exacerbated the problems caused by low exports and falling terms of trade.

2.5 Furthermore, the circumstances of any developing economy -- its political security, debt burden, creditworthiness, reserve adequacy, and capacity to save -- interact with the willingness and ability of its policymakers to stabilize the path of domestic output, borrow to finance shortfalls in net receipts from abroad, and cut consumption (as opposed to investment) to adjust the external imbalance. To sort out the precise path of causal relationships between growth and the terms of trade would require country-by-country analysis of events over a long period, including the starting point for external debt and other stocks and the determination of the sectoral composition of GDP. Such an effort is beyond the scope of this paper.

2.6 Broad analysis of past trends and of the relations shown in Table 2.1 suggests that weak external demand was the principal cause of low terms of trade for most developing countries during 1980-86. The data on export volume corroborate this interpretation (Table 2.2). The 1980s have witnessed a marked flattening of growth in export volumes from most groups of developing countries. For the nonfuel primary exporters, this change in the growth trend was particularly significant. For the oil exporting developing countries,

Table 2.2: DEVELOPING COUNTRIES: MERCHANDISE EXPORT VOLUME, 1973-86  
(percentage changes per annum)

	1973-80	1980-84	1984-86
All Developing Countries	4.7	4.2	2.4
Oil Exporters	-0.9	-0.6	0.1
Non-fuel Primary Exporters	7.0	2.6	1.6
Manufactures Exporters	9.8	8.7	4.1
<u>Memo Items:</u>			
Highly Indebted Countries	1.1	0.3	0.5
Sub-Saharan Africa	0.1	-7.3	5.1

Sources and definitions: Appendix Table A.15-A.22.

exports in volume were also about flat from the oil crisis of 1973 to 1980.<sup>1/</sup> On the other hand, this weakening of export demand left the exporters of manufactures relatively unscathed. In fact, from 1980 to 1986, developing countries exporting mainly manufactured goods achieved an average annual growth of total exports (7.2 percent) that was more than three times the annual rate of growth of nonfuel primary exporters and more than twice that of OECD exports of manufactures over the same period.

2.7 Slower growth of export volumes and worsening terms of trade imply the impairment of the purchasing power of exports.<sup>2/</sup> The contrasts in trends in the purchasing power of exports between the 1970s and 1980s -- and between the primary exporters and manufactures exporters -- are dramatic (Table 2.1). The exporters of manufactures have actually been faring much better in the 1980s than in the 1970s, as the volume of their exports continued to grow and as they also benefited from declining primary commodity prices. The opposite is true of the nonfuel primary exporters and, after 1981, of oil exporters.

2.8 Impaired purchasing power of exports, in turn, hurts national income (shown on a per capita basis in Table 2.1). This is true as a matter of accounting, since national income in constant prices is national product in constant prices minus the fall (or plus the increase) in the purchasing power of exports. Moreover, slow growth in exports impairs the purchasing power of producers and generally of governments, and thus has a secondary impact on

<sup>1/</sup> This category excludes the high-income oil-exporting countries.

<sup>2/</sup> The purchasing power of exports is export revenue deflated by the price of imports (technically referred to as income terms of trade).

demand. It reduces the ability to finance imports directly and through its impact on creditworthiness. These effects can be offset for a time through countercyclical policies, if the country's foreign reserves or borrowing ability are sufficient. It is also possible to counter them over the longer run through structural adjustment. However, it is impossible not to be affected by them.

2.9 The terms-of-trade squeeze on primary exporters during 1980-86 has coincided with much lower rates of GDP growth (Table 2.3). Internal forces, such as the developing countries' fiscal and monetary policies, operating in an environment where external borrowing had become difficult and expensive, could often do little to offset the growth-dampening forces from the global markets. In Sub-Saharan Africa, weather and other local factors determining agricultural production also amplified the external squeeze on incomes. In the highly indebted countries, the average growth of GDP from 1980 to 1986 was only 0.5 percent a year — no higher than that of the oil exporters (a partly overlapping group) whose terms of trade fell by far more.<sup>1/</sup> Evidently, faced with high debt service and a withholding of new lending, the highly indebted countries were in no position to conduct output-stabilizing policies. They were not alone in this.

Table 2.3: DEVELOPING COUNTRIES: GDP IN VOLUME, 1973-86  
(percentage changes per annum)

	1973-80	1980-84	1984-86
All Developing Countries	5.4	2.9	4.3
Oil Exporters	6.0	0.7	0.3
Non-fuel Primary Exporters	4.2	1.6	2.6
Manufactures Exporters	6.0	4.9	7.0
<u>Memo Items</u>			
Highly Indebted Countries	5.4	-0.6	2.8
Sub-Saharan Africa	3.4	-1.3	1.6

Source and definitions: Appendix Table A.17.

<sup>1/</sup> The output of Brazil, which is included in the highly indebted group but is not an oil exporter, changed little from 1980 to 1984 and increased sharply from 1984 to 1986, accounting for much of the change shown in Table 2.3 for the highly-indebted countries during 1980-86.

2.10 Indeed, the majority of highly indebted countries, and to a lesser extent other developing countries, slammed on the brakes in the first half of the 1980s, cutting imports sharply (Table 2.4). Cuts in imports usually went hand-in-hand with cuts in investment, and consumption. Such reactions, when continued for a number of years, seriously impair the capacity to produce and as the Baker initiative emphasized, the capacity to service debt and to consume.

2.11 In 1986 the oil exporters drastically reduced their imports, as the halving of oil revenues in that year came at a time when many of them simply could not borrow substantive new amounts from external private sources. Meanwhile, imports of some of the non-fuel highly indebted countries -- especially Brazil (which is also a manufactures exporter) -- increased sharply. Some of these increases now appear to have been temporary and unsustainable, as they resulted in a dwindling of the trade surplus required to service debt.

Table 2.4: DEVELOPING COUNTRIES: MERCHANDISE IMPORTS IN VOLUME, 1973-86  
(percentage changes per annum)

	1973-80	1980-84	1984-86
All Developing Countries	6.1	0.2	2.0
Oil Exporters	10.3	-3.9	-12.0
Non-oil Primary Exporters	4.3	-1.7	- 2.0
Manufactures Exporters	5.9	3.6	9.6
<u>Memo Items:</u>			
Highly Indebted Countries	5.5	-10.0	- 0.8
Sub-Saharan Africa	7.6	-7.6	- 7.6

Source and Definitions: Appendix Table A18.

2.12 Not surprisingly, exporters of manufactures maintained their import growth (Table 2.4). The annual growth rate from 1980 to 1986 (5.6 percent) was only slightly less than during 1973-80. Given the difference in the behavior of their terms of trade in these two periods, one might have thought that the manufactures exporters could have afforded much faster growth of imports in the 1980s. Indeed, some of them are under increasing pressure to import more. But, as already noted, their growth in export volume has somewhat abated with the slowdown in major industrial economies. In addition, the manufactures exporters have borrowed less each year since 1981 either because of pressures from financial markets or because of policy choices often made to avoid such pressures (Table 2.5).

Table 2.5: DEVELOPING COUNTRIES: NET DISBURSEMENT OF  
TOTAL LONG-TERM LOANS, 1973-86 /a

(billions of dollars)

	1973	1980	1981	1982	1983	1984	1985	1986
All Developing Countries	16	58	76	69	54	41	26	29
Oil Exporters	5	15	22	15	12	5	1	8
Non-oil Primary Exporters	5	26	32	35	25	20	17	17
Manufactures Exporters	6	16	22	19	17	16	7	3
<u>Memo Items:</u>								
Highly Indebted Countries	7	29	43	34	21	14	5	9
Sub-Saharan Africa	1	8	8	9	8	3	1	5

/a Including the effects of rescheduling and other exceptional finance.  
Figures for 1986 are staff estimates.

Source: Economic Analysis and Projections Department, World Bank.

2.13 To sum up, the fall of real commodity prices during the 1980s engendered a fall in the terms of trade of primary-producing developing countries to a historically low level. Both the oil exporters and nonfuel primary-exporting countries have been affected. After growing rapidly from 1973 to 1980, the oil exporters' GDP has been almost flat during the last six years. The 1986 drop in oil prices has further impaired their future growth. For the nonfuel primary exporters, growth since 1980 has also been very slow. Their per capita incomes have declined. The average growth rate of their GDP in constant prices since 1973 remains slightly lower than that of the oil exporters, and that of their national incomes in constant prices, much lower. The big difference in overall performance -- and in all aspects of what has been reviewed here -- is between the primary exporters and the exporters of manufactures. Of the big difference in their growth rates, a portion could be directly attributed to the terms of trade, some to recent policies, some to easier policies which had caused them to become exporters of manufactures and to reduce their dependence on primary commodities in the first place.

How Future Weakness in Commodity Prices May Impair Future Incomes

2.14 For most primary exporters, the Bank's long-term projections envision a return to positive rates of growth in imports and incomes (see Table 2.1). These are increases, however, from a very low base in 1986. Slow growth of export revenues affects not only incomes and production directly; it also reduces future creditworthiness and thus financial inflows. There is thus a double impact on investment and imports and, through them, on production growth.

2.15 From 1986 to 1995 the export volumes of nonfuel primary exporters are expected to increase by 4.8 percent a year, while their terms of trade are likely to improve, if slightly, from the low level of 1986. Their terms of trade in 1995 would still be some 30 percent below the level of 1965 and 10 percent below that of 1980. Moreover, a large share of foreign exchange receipts will have to service debt, while net external borrowing is most likely to continue to fall. Import volumes would then be able to rise by only about 4 percent a year. This small rise would keep the growth rate of GDP in these countries below the average achieved before 1980. Per capita incomes during 1986-95 would rise by less than 2 percent a year. These projections are based on a projected growth rate of exports (4.8 percent) that is far above the average rate achieved so far in the 1980s. If no such improvement materializes, the implications for growth will be grim.

2.16 For oil-exporting developing countries, despite the expected increase in oil prices through the end of the 1990s, low levels of external finance are expected to hold import growth to only 4 percent a year. GDP growth should pick up to about 4 percent a year, still slower than before 1980. These countries face the difficult task of reorienting investment and production to greatly reduced crude oil prices. Partly because investment decisions were based on steadily increasing oil prices -- and partly because the windfall from the sharp increases in oil prices of 1973-74 and 1979-80 allowed the maintenance of overvalued real exchange rates which stifled manufacturing and agriculture -- the structure of investment in many of these countries is not appropriate to the new prices. These countries may thus have to devote a large part of the projected increases in output to building up the capital base needed to compete in nonfuel activities. Increases in their per capita consumption may therefore have to lag behind increases in per capita output, despite the expected improvement in their terms of trade.

2.17 If the highly indebted countries are successful in sustaining policy reforms, and if external circumstances allow them to fill their minimal borrowing needs, they should achieve a gradual acceleration of output and income growth during 1986-95. Increases in import volumes of more than 6 percent a year will help recovery. Brazil's weight in this group is large, and its high (and perhaps overly optimistic) projected rates of GDP growth disguise the less favorable prospects for other countries. Apart from Brazil, GDP growth in the heavily indebted countries is projected to be a little over 4 percent a year, a figure that builds in some recovery from severe recent recessions. This projection also reflects the expected working out of medium-term adjustment programs, which frequently provide for reduced dependence on primary exports. With fairly stable and open world trade, the exports of manufactures from these countries are expected to increase by 8 percent a year

during 1986-95, and the purchasing power of their exports by 6 percent. Obviously, such a projection makes heavy demands on the resilience of the industrial countries and their willingness to keep their markets open. A number of oil-exporting and other primary commodity dependent countries are not expected to reach their 1980 per capita income levels again until the mid-1990s.

2.18 For both oil and nonoil exporters in Sub-Saharan Africa, per capita incomes should begin to rise again, averaging a little less than 1 percent a year during 1986-95. Even so, their per capita incomes in 1995 would still be about 20 percent below the level reached in 1980. Oil exporters in Sub-Saharan Africa should benefit from the increase in oil prices, and their export volumes should also rise. But while the purchasing power of their exports may increase substantially, the lack of private external finance will constrain the growth of import volumes. The purchasing power of the nonfuel primary exporters in Sub-Saharan Africa is projected to increase at a much slower rate than that of oil exporters, and their import volumes would rise by only about 2.5 percent a year. In 1995, their per capita incomes would have recovered somewhat from today's level but still would remain some 6 percent below that of 1980. The lower-income countries in this group would be even worse off. In the year 2000 their per capita incomes would still be at least 10 percent below the level of 1965.

2.19 Countries that mainly export manufactures face a much better future. Their terms of trade may decline somewhat from the levels reached in 1986, when both oil and nonoil commodity prices fell steeply relative to the prices of their manufactured exports. But their ability to import should continue to increase at a healthy rate over the next 10 years, aided by low primary prices, increased demand from industrial countries, and continued (or renewed) use of private external finance. The expected increase in their exports of almost 6.5 percent a year, though less than that recorded in the 1970s, still greatly exceeds the average for primary exporters. These countries can -- with reasonable demand growth in industrial countries and no major increase in trade protectionism -- continue to expand their output at a fast rate and see their per capita incomes grow more than 4 percent a year over the next 10 years. To be sure, these countries too are vulnerable on a number of fronts. Slower than expected growth in industrial countries would considerably reduce growth in their exports, since the income-elasticity of manufactured imports is fairly high. Then, too, exporters of manufactures may also face the negative effects of protectionist reactions or strong competitive responses from the industrial powers.

2.20 All these trends are subject to great uncertainty. The foregoing discussion has dwelt on some of the likely implications of a slow recovery of commodity prices over the next 10 years. What would help in all this is an even greater commitment to domestic policy reforms in some developing countries, including a more rapid deployment of resources toward manufacturing exports. Also important is improved economic management in the major industrial countries and a common dedication to an open trading environment. If these conditions materialize, the outcomes for growth could be better than those anticipated here, including a faster rebound of the terms of trade of primary producers. While there are worrisome downside risks, the possibility of better outcomes from forward-looking attitudes on international trade -- payments -- and from successes in domestic policy -- should not be discounted.

### 3. INDUSTRIAL COUNTRY AGRICULTURAL POLICIES

3.1 Industrial countries tax or limit the imports of most agricultural commodities and subsidize the exports of many. The import restraints range from fixed import levies, through variable ones designed to equalize import prices and domestic price levels, to formal nontariff barriers, and to informal ones in the guise of health and sanitary requirements. Because these policies have not kept domestic prices up to desired levels, they have been complemented with direct price supports and equivalent measures. Not only do these policies bear high economic costs and increasing budgetary costs. They also do much to depress world agricultural prices. Most serious is the greater uncertainty they introduce to trade relations, investment decisions, and development plans. No one knows how and when they may be modified, and while in force they amplify price variations on international markets.

#### Price Supports

3.2 Agricultural protection policies have generally aimed, more or less explicitly, at providing income support to farmers. Such other concerns as food self-sufficiency, national independence, and foreign exchange savings, though still mentioned at times, are no longer significant determinants of agricultural policy in industrial countries. Price supports have been a preferred form of income support because their economic costs are hidden and their budgetary costs are initially small. But because they stimulate production and, at least where substitute commodities are available, depress consumption, the output of protected commodities has often grown to exceed national demand, leading to growing surpluses and to higher and more visible budgetary costs. These in turn limit the amount of price support that can effectively be provided. Meanwhile, the domestic interventions of industrial countries, as large actors in world markets, significantly depress world prices through limits on imports, subsidized sales of exports, and a growing overhang of stocks.

#### Difficulties in Determining Winners and Losers

3.3 There is growing dissatisfaction with price support policies in industrial countries. Their direct beneficiaries find them inadequate while others deplore their high costs. New policy instruments have thus been introduced, such as direct production controls (area or output restrictions) complemented by subsidized exports both to regular markets and as food aid. This disposal of surpluses has contributed to further depressing world prices of many temperate agricultural commodities and of those competing with them. Not only have low-cost producers of such commodities (wheat, maize, sugar, beef, dairy products) lost part or all of their natural markets in industrial countries. They are also losing out to heavily subsidized competition in third markets -- that is, in other industrial countries, in developing countries, and in the Soviet Union and other East European economies.

3.4 From the world economy's viewpoint, all this clearly reduces overall productive efficiency, as world production shifts from more efficient to less efficient producers. This net loss in efficiency is made up of gross losses to some groups: consumers and industrial users in industrial countries, and producers in other exporting countries. Their losses exceed the gains to beneficiaries: producers in industrial countries for whom part or all of the subsidy received is a rent; producers of substitute products, who may also benefit from higher prices; and other importing countries whose import costs are reduced. Because production is higher in high-cost areas and lower in low-cost areas than it would otherwise have been, the overall costs are higher. That is why the gainers' gains are smaller than the losers' losses.

3.5 These gains and losses are extremely difficult to measure, in part because of the complexity of the interrelationships. For instance, the sugar protection policies of industrial countries clearly involve a loss to their consumers and gains to their sugar producers (often large units providing their owners with relatively high returns). Those policies have also benefited corn producers by promoting the substitution of high fructose corn syrup for cane and beet sugar in the United States. Such policies may have hurt industrial country producers of confectionary and other sugar-using products. They have definitely hurt developing country sugar producers, but to a varying extent depending on their quota and other arrangements existing in industrial country markets. Countries that receive such concessions benefit from them through their quota exports, but lose through their nonquota exports. Thus a few small producers with relatively large quotas may have been net beneficiaries. But the overall impact on sugar-producing developing countries has been strongly negative.

3.6 Similarly, the protection of grain producers has hurt domestic consumers directly and (through higher meat costs) indirectly. It has hurt developing country exporters of foodgrains, but helped exporters of substitutes such as animal feeds (oil cake and cassava). By raising the costs of domestic meat, this protection has benefited meat exporters of other countries, though these same exporters suffer losses through import restrictions on meat and through occasional subsidized exports. It seems probable, moreover, that cassava exports for use as animal feed would not have started at all without the agricultural policy that raised European grain prices. Later, the cassava exports from Thailand and then from Indonesia were subjected to quotas, further complicating the computation of net benefits and losses to, say, cassava producers and to developing countries in general.

3.7 Price supports for dairy products clearly hurt consumers -- and benefit producers. Others are affected diversely: for example, producers of tropical fats and oils benefit from the increased use of substitutes (margarine), but lose from import controls and subsidized butter exports, which in turn benefit importers of fats and oils.

3.8 Soybeans are not covered by the U.S. production restraint policy, and soybean meal production has been growing in the United States partly in response to EEC demand for feedgrain substitutes, demand enhanced by the high EEC feedgrain prices. As soybean meal and oil are joint products, the upshot is increased competition from U.S. soybean oil, which partly accounts for the decline in world prices of coconut and palm oil exports from the developing countries. This price decline has hurt, among others, Indonesia, which had benefited from EEC policies through its cassava exports.

3.9 These examples show the difficulties faced in calculating benefits and costs of existing policies. The advantage of efficient price systems is to reflect these costs and benefits precisely and spare the necessity of such calculations. It is impossible for the economist to replicate these effects precisely, particularly when comparing the existing situation with a hypothetical alternative. Price changes from hypothetical redistributions of world production and consumption cannot be measured. They have to be derived from models that postulate economic reactions and relationships. So, all such estimates are approximate, to be taken only as orders of magnitude.

#### High Economic Costs for the Industrial Countries

3.10 Some indication of the costs of agricultural protection to the industrial countries can be derived from available estimates. These refer to the cost to consumers (in terms of higher prices paid by them), to the costs to taxpayers (in terms of the funds needed to finance and administer the various measures), and to the benefits to producers (in terms of the higher prices received by them). Total domestic costs, the difference between these three components, represent the resource allocation costs of support policies for agriculture. They are the deadweight losses incurred by domestic economies.

3.11 In the United States, agricultural support is estimated to have generated in 1985 costs to the economy of about \$4.5 billion. It involved a transfer ratio of 1.40 (the average loss to consumers and taxpayers for each dollar transferred to the producers). It has been similarly estimated that the total domestic costs of the EEC's Common Agricultural Policy was \$15.4 billion in 1980, with a transfer ratio equal to 1.50. In Japan, agricultural protection is estimated to have had a domestic cost of \$4 billion in 1976 and to have incurred a transfer ratio of 2.60, reflecting the high relative domestic price of rice (Table 3.1).

3.12 Expressed in 1985 dollars, the annual costs of agricultural protection in these three major industrial areas were estimated to amount to \$33 billion, or 0.4 percent of their combined GNP. Every year a nonnegligible portion of real output is forgone in these areas, because of efficiency losses due to the agricultural policies in place. And these estimates are likely to tell only part of the story. They ignore the long-run distorting effects of agricultural interventions -- such as those from the diversion of investment and research and development from other sectors.

Table 3.1: ANNUAL DOMESTIC COSTS AND BENEFITS OF AGRICULTURAL POLICIES IN THE EEC, JAPAN AND THE UNITED STATES

(billions of dollars)

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Country & Year	Consumer Costs	+ Taxpayer Costs	- Producer Benefits	= Total Domestic Costs	Transfer Ratio
EC (1980)	34.6	11.5	30.7	15.4	1.5
Japan (1976)	7.1	-0.4	2.6	4.1	2.6
United States (1985)	5.7	10.3	11.6	4.4	1.4

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Source: World Development Report, 1986.

3.13 Qualitative but telling indications of the economic costs can be derived from single products. For example, with supported prices several times higher than world prices, the EEC became the world's largest sugar exporter in 1982. Japan produced about 900,000 tons of sugar in 1986, about a third of domestic consumption. The price to producers there has been more than seven times the world price, in recent years, while consumers paid about five times the world price. Meanwhile, Japan's sugar consumption has fallen slightly. In the United States, sugar producers -- as well as producers of chemical and other sugar substitutes -- benefit from import quotas on sugar. These quotas have been reduced from 2.9 million short tons in 1982-83 to 1.3 million in 1987. Because of the recent fall in world market prices, the price difference between these and the protected domestic markets has increased. This increase has magnified both economic and budgetary costs. Even more threatening is the prospect that, with present policies, these costs will continue mounting.

#### The Costs for Developing Countries

3.14 The net costs of protection policies in the industrial countries (and the much larger gross costs borne by their consumers and taxpayers) are not the only effect. Those policies also have an impact on the rest of the world. Here again, there are both losses and gains, but the losses from present policies outweigh the gains. According to some early calculations, developing countries suffered the most substantial losses because of trade

restraints aimed not even at protecting agricultural production, but at protecting processing industries or at raising revenues. <sup>1/</sup> Trade restraints on coffee and cocoa -- commodities not produced in most temperate industrial countries -- cost the developing country exporters heavily. A 50-percent reduction of the trade restraints on these primary commodities and their processed products in 1975-77 would have raised developing country export earnings by almost \$600 million a year in 1985 dollars (see Table 3.2). Constraints on sugar -- a tropical product but also a heavily protected temperate one -- imposed the largest direct loss on developing countries, when compared with the situation under free trade. A 50-percent reduction in the OECD tariff on sugar in 1975-77, and the equivalent relaxation of quantitative restrictions, would have yielded developing countries an annual increase of \$1.5 billion in their export earnings.

3.15 The overall benefit to developing countries of a 50-percent reduction in OECD tariffs on agricultural imports and the equivalent relaxation of quantitative restrictions, was estimated at \$3.5 billion a year in increased export earnings (again in 1985 dollars). Liberalization would also have raised developing countries' import prices, but by less than \$1 billion a year (notably for cereals and for some types of fats, oils, and fibers). These trade changes reflect both price and volume changes. As the production of additional exports requires resources, the net income gain to developing countries would be smaller -- estimated at about \$650 million a year during 1975-77 (in 1985 dollars). While current studies, covering the same spectrum of products, are not available, it is nevertheless clear that recent market developments and policy shifts have magnified the costs of these policies for both industrial and developing countries.

3.16 The impact on individual countries is even more significant. Food exporters such as Brazil, Argentina, and the Philippines could have their export revenues and real incomes increase substantially as a result of liberalization by the industrial countries. But the rise in import prices would hurt such food importers as Iraq, Egypt, Korea, and Nigeria. Since protection in industrial countries has increased since 1977, the real income gains from trade liberalization could be much greater now.

3.17 A slightly different study simulated the impact of trade liberalization in selected temperate commodities. The net impact of such liberalization by the industrial countries is slightly negative for developing countries as a group, because they are net importers of such commodities. Their loss arises from the increase in world prices that would follow such liberalization. This impact is perhaps not surprising, given that these commodities are produced mainly by the industrial countries which, even without protection, have a comparative advantage in them.

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<sup>1/</sup> See World Development Report, 1986.

TABLE 3.2: CHANGES IN EXPORT REVENUES, IMPORT COSTS, AND REAL INCOMES FOR SELECTED COMMODITIES  
OF DEVELOPING COUNTRIES RESULTING FROM A FIFTY PERCENT REDUCTION  
IN OECD TARIFF RATES (ANNUAL RATE), 1975-77

(MILLIONS OF 1985 DOLLARS)

Commodity	Developing Country Groups						Middle- Income
	All Developing Countries	Sub-Saharan Africa	Asia	North Africa/ Middle East	Latin America	Low- Income	
<u>Increase in export revenues</u>							
Sugar & sugar products	1,479	33	506	5	934	276	1,202
Meats	460	18	19	5	417	23	436
Wheat	142	-	-	10	133	-	142
Coarse grains	175	7	16	31	122	10	166
Vegetable oils, cakes, nuts, etc.	517	55	174	59	230	86	431
Temperate-zone fruits & vegetables	138	1	11	52	74	42	96
Cocoa	201	112	1	-	86	15	186
Coffee	379	90	23	-	265	86	293
Total increase	3,491	316	751	163	2,261	539	2,952
<u>Change in import costs</u>							
Cereals	-614	-7	-311	-228	-68	-372	-242
Other commodities	-349	-25	-86	-127	-111	-107	-242
Total decrease	-963	-31	-397	-356	-179	-479	-484
<u>Change in real incomes</u> /A	647	119	104	-181	605	-3	650

/A Defined as increase in export revenues, less the production cost of the increased exports, minus the loss in in real income due to the increased prices for imports (particularly wheat).

Source: A. Valdez and J. Zietz, "Agricultural Protection in OECD Countries: Its Cost to Less-Developed Countries," International Food Policy Research Institute Research Report No. 231, December 1980.

3.18 Conversely, developing countries as a group could benefit greatly and immediately from the liberalization of imports of tropical commodities and products by industrial countries. Moreover, these gains could often be achieved at limited cost to producers in industrial countries, while their consumers would directly gain from such a trade policy shift. Developing country producers would gain because they bear most of the burden of taxation of imports in these commodities that have relatively inelastic demand and supply.

#### Broader Implications of Agricultural Protection

3.19 In certain cases it could be sensible for some developing countries to develop production and demand structures that depend on subsidized food exports from the industrial countries or on other products whose world prices are lower than they would otherwise be on account of industrial country policies -- but only if these policies could be seen as dependable and durable. Experience shows, however, that they cannot be seen as such, something that countries excessively dependent on food aid have learned from time to time at their own expense. Thus developing country importers often cannot take full advantage of the depressed prices of internationally traded agricultural commodities. And if they do, they face the risk of needing to implement wrenching and costly reorientations of their policies for agriculture and overall development.

3.20 Another broad effect of the agricultural policies of industrial countries is their bad example. Through pervasive and often haphazard interventions that disrupt world trade and distort relative prices (between both commodities and countries). These policies have a bad influence on the overall trade postures of developing countries. By their example and disruptions, they encourage a mixture of autarky, high protection, and excessive import dependence -- and thus waste national and world resources.

3.21 The industrial countries bear most of the costs of their agricultural policies. And paying these costs are first and foremost the consumers and taxpayers of each country or group -- and second the suppliers in other industrial countries. Nevertheless, the developing countries as a group also bear significant costs. So, the benefits they would derive from liberalization would be significant, too. Liberalized trade in tropical products would bring unequivocal benefits to most developing country groups and to many individual countries, including most low-income countries. Liberalized trade in temperate products would have less widely distributed benefits among developing countries and would entail costs for some of them, but would greatly boost the export prospects of some others. Yet the net overall direct benefits of liberalized agricultural trade, though significant, would be dwarfed by its indirect benefits: those deriving from accelerated growth in the industrial countries themselves, brought about by more efficient resource allocation; and those coming from a general easing of trade tensions and consequent lower uncertainties and higher investment optimism in export sectors.

### Toward Policy Reform

3.22 The pervasiveness and duration of agricultural policies in industrial countries, despite their acknowledged costs, is a clear sign of the strong political forces supporting them. When the corn laws were abolished in Britain in the early 19th century, urban consumers (and their employers) were keenly aware of how they would benefit from cheap bread, and they constituted a powerful pressure group. Wheat or fruits and vegetables now account for a small fraction of what consumers spend on food in industrial countries. And the relative importance of food in total household expenditure is also declining. So, consumers are not as acutely aware of the costs of policies that raise agricultural prices. But agricultural producers are attached to their way of life, their land and their regions of origin. Often they are also so heavily indebted that small changes in real agricultural prices make very big differences to their net worth. In the current state of the industrial economies they also face major difficulties in finding alternative employment. Farmers, therefore, organize and make unrelenting efforts in their quest for government assistance. Their concerns are often not strongly opposed by other segments of society, whose interests are more diffused.

3.23 Such great attachment to policies by a few, and only very mild opposition (or indifference) by many, is what makes pressure groups highly effective. But domestic opposition to protective agricultural policies has recently increased somewhat because of the growth of commodity surpluses and the direct budgetary cost they entail. As food deficits turned into surpluses in Europe, and as the difference rose between world market prices and domestic target prices in the United States, the budgetary costs of farm policies have soared. They are now estimated to exceed \$25 billion a year both in the United States and in the EEC, and \$10 billion in Japan.

3.24 Radical reform of current farm policies may not come soon. But aside from the pressures arising from ever-mounting budgetary costs, it would not be realistic to expect that the treatment of agricultural trade can be forever independent of the treatment of trade in other commodities and manufactures. To maintain harmonious economic relations among industrial countries, reform of agricultural policies is needed. This is another important motivation for reforming farm policies in industrial countries. To be politically acceptable, these improved policies must provide some appropriate protection to the incomes of farm families. The most efficient way to achieve this is through direct income subsidies. Moving toward freer trade and better distribution of world agricultural production could yield efficiency gains vastly superior to the direct costs of farm income subsidies.

3.25 While reform is in the direct self-interest of each industrial country, it would be naive to expect it to take place unilaterally. Only coordinated concessions are likely to succeed in devising sound, durable solutions. An acceleration of world growth above what is now projected, thanks to improved macroeconomic policies, would provide a propitious environment for such efforts. In such an environment, developing countries would benefit from improved agricultural policies in the industrial countries. And by accelerating the growth of their demand for agricultural

commodities, already the fastest-growing element of world demand, the developing countries would also facilitate such policy improvements.

3.26 The Uruguay round of trade negotiations provides a good opportunity for a negotiating effort. However, it will not be completed for several years. Meanwhile, one must halt and at least partially reverse the worsening of the domestic and international disequilibria caused by agricultural policies. It is not possible to continue trying to correct domestic market disequilibria by transmitting them in an amplified form and at high budgetary cost, to international markets. Nor will it be possible to negotiate rational long-term solutions while surplus agricultural stocks grow larger, subsidized exports more pervasive (and mutually self-defeating), and tempers shorter. A significant start towards a solution must be made very soon.

#### 4. DEVELOPING COUNTRY POLICIES

4.1 The overall demand for all primary commodities considered together has low income-elasticity and low price-elasticity. The low income-elasticity of demand means that as incomes grow, a declining fraction of additional income is devoted to additional purchases of primary commodities. Low price-elasticity means that falling commodity prices do not induce a major increase in the volumes consumed (and that rising prices do not induce a major decline in consumption). So, the collective earnings of all primary commodities producers are raised by faster growth of manufacturing production and of incomes in general, but they are lowered by faster growth of primary commodity production. Given these relationships and today's depressed markets, the commodity policy problem for developing countries (and for the institutions whose main mission is to assist their development efforts) is whether it is reasonable to press for efficient production of primary commodities.

##### How Prices Affect Demand

4.2 The bulk of primary commodity production in developing countries is in agriculture, for the domestic market: it is dominated by foodgrains, other food items, and natural fibers. Whether the demand for such goods is price-elastic or not, the benefits from increased production accrue to the domestic economy, if not in higher incomes to the producers, then as lower prices for domestic consumers. There can be no rational desire or justification for restraining production for the domestic market below its economic potential. Things get a little more complex when dealing with production for exports.

4.3 Over the long run, however, changing prices do affect the demand for most individual commodities. Many commodities can be substituted for one another after a more or less long period. For example, as the price of aluminum declined relative to that of other metals, it substituted for copper in many electrical uses, and for tin in others, including foils and cans for food and beverages. Similarly, plastics have substituted for metals, cotton for linen, synthetic fibers for natural ones, polyolefins for jute, wheat for rice, and potatoes for rye and barley. In the very short run different fats and oils are complements in the production of various foods and toiletries, but in the slightly longer run they compete with each other.

4.4 Final consumers as well as industrial users and processors react, make choices, and substitute products in the light of relative price changes. This is most obvious for similar product categories: household consumption shifts to the fruits and green vegetables most abundant and cheapest in each season; the high price of beef tends to shift consumption toward chicken. Different types of apples are closer substitutes for each other than for oranges, and the price-elasticity of demand for one type of fruit or vegetable is higher than for fruits and vegetables in general. Some of these shifts then become embedded in tastes. Over a few decades, Northern European consumers once shifted from coarse grains to potatoes, which offered much cheaper calories. Now it would take a major jolt to cause potato-eaters to shift back to rye bread and barley porridge.

4.5 Substitutability generally increases over time for raw materials as well. Many production processes and technologies are embedded in capital equipment adapted to specific raw material input mixes. In the short run, relative price changes, particularly if they are expected to be reversed, may not lead to major changes in the use of production inputs. But as equipment is readjusted or changed in response to lasting relative price movements, there can be major shifts in raw materials use. The speed of shifting depends on the size of the relative price changes and the closeness of substitutes. In the short run, the demand for jute for bagging and carpet-backing is unresponsive to changes in price. But when some users re-equip themselves to shift to polyolefins each time the jute price rises, they never return to jute. So in the long run, the demand for jute is very responsive to price changes.

4.6 The income effect of a given price change -- which depends on the share of a given commodity in household budgets -- is also important, as is its share in total production costs. The price-elasticity of consumer demand for salt has always been low because it has no substitute. But it has fallen over the centuries, because salt nowadays takes up a much smaller (even miniscule) fraction of household budgets. Conversely, aluminum and plastics for automobile production faced fairly price-insensitive demand when these were specialized materials, used sparingly. Demand for them became much more price-sensitive when the need for lighter cars made these materials substantive components of total car costs.

4.7 The point, then, is that the low price-elasticity of demand for all primary commodities in aggregate does not generally apply to individual primary commodities over the long run. So, reducing the supply of a specific primary commodity does not necessarily mean higher earnings for its producers over the long run. And stepping up the production of a specific commodity may well lead to fast-growing earnings for its producers, despite the generally low income and price elasticities of primary commodities in general.

#### All Producers vs. One Producer

4.8 The contrast between all commodities and individual commodities finds a parallel in the contrast between all producers taken together and individual producers. Even if demand for a specific commodity were price-inelastic, this would not be the case for the production and exports of a single country (or a single firm). Demand for the products of most individual firms and of many countries is almost completely elastic, even in the short run. They usually are small participants in the overall market, and their supplies do not perceptibly affect prices. Some countries may be large enough suppliers of specific commodities to influence prices in the short run. They may even face price-responsive demand for their own supplies. This is true even more frequently for groups of suppliers considered together, whether they coordinate their policies or not.

4.9. Such producer groups nevertheless have to be very sure of the historical and technical evidence of long-run inelasticity before they seek to

raise their earnings by reducing their production. They must also be sure of their hold over the overwhelming bulk of actual and potential supplies. Even where producers consider their actions feasible on the basis of past behavior, they must carefully consider the price at which demand switches from relative insensitivity to prices to great sensitivity. Moreover, in moving from a coalition of all producers to one of all exporters and to (the more usual) one of only some of the exporting countries, the price-sensitivity of demand for the products of such groups is further raised by the supply response of producers not taking part in supply-restraining arrangements.

4.10 Petroleum and, more broadly, energy prices have provided a dramatic illustration of this. The price-elasticity of demand for petroleum was once low. Since the dramatic price rise of the early 1970s, the energy-intensity of national products and of particular production processes has declined dramatically worldwide, as new processes and new consumer habits appeared. Meanwhile, non-OPEC suppliers have gained in importance, further increasing the price-responsiveness of demand for OPEC oil.

4.11 Usually, the higher the price above prevailing marginal costs, the higher and faster are both the substitution effects that raise price responsiveness over the long run and the incentives to suppliers to increase their production and have a "free ride" on the restraint of the others. Yet, without the prospects of substantially higher prices, there is little incentive to join production-restraining arrangements. Requiring difficult negotiations, such agreements normally aim at raising prices substantially, thus provoking strong reactions from users and nonparticipating producers -- and cheating by participants. That is why most production-restraint agreements begin with considerable price and revenue increases for producers -- and end with a price collapse amid reduced final use and increased production by nonparticipants.

4.12 Even in a group of net exporters of a specific commodity, interests may diverge. If demand is price-inelastic, exporters of the commodity would collectively raise their earnings if they all reduced their production. But a proportionate change in their exports affects their incomes disproportionately. Producers with high marginal costs benefit most from lower sales with higher prices; producers with low marginal costs benefit least. The common problems of producers' groups in allocating production or export quotas reveal these divergences of interest. OPEC is not the only example. All commodity arrangements that use export quotas to influence the market, such as those for tin and coffee, offer examples of lasting conflicts of interest between high-cost and low-cost producers in getting collective market action.

#### The Commodity Policy Dilemma: efficient supply vs. inelastic demand

4.13 The essence of the commodity policy problem lies in these contrasts between the short and long run, between narrowly and broadly considered commodity groups, and between individual producer firms and producing countries and country groups. Country policies must resolve the apparent dilemma that these market realities pose for most commodities. There is a

seeming contradiction between record-low nonfuel commodity prices and the efforts of producers, particularly in developing countries, to produce more. Given the low overall price and income responsiveness of demand for commodities, increased production efforts seem to conflict with the collective interest of producers. But for most individual commodities, for single producer countries, and even for country groups (albeit with noteworthy exceptions), the conflict is really limited to the short run, when demand may indeed be inelastic. Demand generally is quite price-elastic in the long run, as processors adapt their capacities to substitute raw material inputs and consumers change their patterns of consumption -- and as the divergent interests of suppliers reduce their collective ability to influence markets. So, in the long run, efficient production is generally in the interest of even large producer groups -- of developing country producers individually and, given market realities, collectively.

#### Domestic Policy: inefficiencies and reforms

4.14 Domestic policies have often contributed to the unfavorable evolution of sectors producing primary commodities. Developing countries sometimes protect or subsidize their primary commodity producers, but more often they discriminate against them, particularly in agriculture. They discriminate in many interacting ways: with export taxes, quantity constraints, overvalued exchange rates, import restraints on both agriculture and industry, price controls on domestically consumed primary commodities, and government-controlled marketing organizations. The occasional subsidization of specific inputs usually only partially offsets the effects of such measures.

4.15 This unfavorable treatment of primary sectors has many roots. One is the natural need in an underdeveloped economy to tax the largest productive sector and channel resources to the other sectors. A second is protection for infant manufacturing industries. A third is the legitimate desire to appropriate for the government the rents from natural resources, particularly if they are exhaustible. Frequently, the preponderance of foreign firms in plantation agriculture and in mining seemed to provide further arguments for such a treatment. Heavy taxation of agriculture and other primary sectors fitted well with the notion that they were the only sources of savings to be tapped for industrialization. These policies have often been influenced by the belief that domestic supply, particularly in agriculture, and foreign demand for most agricultural and mineral commodities were both price-inelastic. The same belief has also led to import-substituting industrialization policies through heavy protection of the domestic manufacturing sector. But raising the prices of manufactures has further added to the burdens of primary producers.

4.16. Relative protection ratios show how the value added in one sector is protected relative to value added in others. In most developing countries, the relative protection ratios of agriculture are substantially less than one, implying a large bias in favor of manufacturing. Korea represents the exception among the developing countries for which recent estimates of relative effective protection in agriculture are available (Table 4.1).

Table 4.1: PROTECTION OF AGRICULTURE RELATIVE TO MANUFACTURING  
IN SELECTED DEVELOPING COUNTRIES

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Country	Year	Relative Protection Ratio <u>/a</u>
Argentina	1969	0.46
Philippines	1974	0.76
Colombia	1978	0.49
Brazil	1980	0.65
Mexico	1980	0.88
Nigeria	1980	0.35
Egypt	1981	0.57
Peru	1981	0.68
Turkey	1981	0.77
Korea	1982	1.36
Ecuador	1983	0.65

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/a Ratio of effective protection for agriculture and manufacturing.

Source: World Development Report, 1986.

4.17 Even more important than relative protection, however, are overvalued real exchange rates that discriminate against all sectors producing tradable goods. Their unfavorable effects are exemplified in Sub-Saharan Africa. Between 1978 and 1984 Sub-Saharan African countries experienced an average appreciation of their real exchange rates of over 45%. Oil-exporting countries were responsible for this trend (Table 4.2). But the trend started in the 1970s, with countries such as Nigeria and Ghana showing the fastest appreciation of their real exchange rate. Ghana's plummeting shares of cocoa exports and, more generally, Sub-Saharan Africa's falling share of global primary commodity exports cannot be fully explained without considering the adverse effects of the exchange rate appreciations that occurred in the 1970s and lasted until the mid-1980s.

4.18 Overvalued exchange rates and high protection have also penalized other exports, including those of manufactures. The countries that followed inward-oriented policies have shut themselves off from the rapid growth of global trade in manufactures and often have paradoxically remained among those most reliant on primary commodities. Thus, the inward-oriented industrialization strategies that overburden the primary-producing sectors have often also led industrialization into a blind alley. Misguided industrialization has in turn contributed to the downward pressure on world primary commodity prices by holding the growth of demand in developing countries below its potential.

Table 4.2: SUB-SAHARAN AFRICA: REAL EFFECTIVE EXCHANGE RATES

(Base 1980=100)

Country Groups	1978	1981	1983	1984	1985	First Half 1986
All Sub-Saharan Africa	95.12	109.87	117.43	138.73	128.85	103.68
IDA-Eligible Countries	98.27	112.24	110.46	101.49	98.23	86.36
Non-IDA Countries	93.19	108.42	121.69	161.54	147.60	114.29
Oil Exporters	92.02	109.95	127.14	174.82	159.22	119.77
Oil Importers	99.29	100.44	93.20	92.03	86.84	85.63

Source: International Monetary Fund.

4.19 The same strategies have contributed to the declining ability of many African (and some other) developing countries to feed themselves. As was stressed earlier, whether or not the low elasticities of demand for commodities in general justify some forms of discrimination against specific export commodities (and generally they do not), they certainly do not justify restraining the growth of agricultural (and other primary) production for the domestic market. Yet the measures just listed -- overvalued exchange rates and protected manufacturing leading to high-priced manufactures and foreign exchange shortages leading to scarcities of consumer or production goods -- weigh equally on all forms of agriculture. It is sometimes alleged that food production has in some countries been sacrificed to excessive development of export crops. In reality, the policies that depressed the production of export crops were often broad, economywide distortions that were equally burdensome for all agricultural production, whether for export or the domestic market. Thus, the countries that lost shares in export agriculture also typically were those whose food production for domestic consumption also grew slowest. The loss in export shares by Sub-Saharan Africa coincided with a decline in per capita food production in the region (by about 1.7 percent a year from 1973 to 1984, almost the same rate as the decline of 1.9 percent in total agricultural production during the period).

4.20 In the past few years, many developing countries have taken substantial steps to reform their policies for agriculture and other primary

products. As the Bank's World Development Report 86 argued, reforms of sector-specific and economywide policies must be coordinated, not divorced. The impact of exchange rate policies and trade restrictions is often stronger than that of sector-specific taxes or subsidies. In this regard, many African countries significantly reduced the overvaluation of their exchange rates during 1984-1986. If they sustain these efforts, they will spur production, exports, and efficient import-substitution. (In primary-commodity-based developing economies, the inability of domestic food crops to compete with imports at the official exchange rate is often a good indicator that the exchange rate is overvalued.)

4.21 Efficient production and pricing should properly take into account the replacement cost of some natural resources and the irreplaceability of others -- be they minerals, primary forests, or unpolluted water and air. This is easier said than done. World market prices may not reflect a correct appreciation of such costs, and there is rarely a prevailing consensus. Each country must make its own judgment, amid conflicting considerations. If exports are to remain competitive, fees, royalties, and the like must not grossly exceed what is charged (or imputed) by others. The charges must properly compensate for the exhaustion of natural resources, but also recognize that yesterday's useless or unreachable materials may through technical progress become tomorrow's resource. Even the certainty that a specific resource, once used, will be gone forever, is to be balanced against the knowledge that all of today's other opportunities will be gone as well, opportunities that could be used to improve the lot of present and future generations.

#### Proper Policies for International Competitiveness

4.22 Despite depressed world prices, both present and projected, it is generally in the interest of developing countries to improve the incentives for producing export commodities. At the core of the explanation of this apparent paradox is the discussion of different elasticities earlier in this chapter. In the medium to long run, the demand facing a single developing country producer is practically never price-inelastic. The demand facing a group of producers of a specific commodity may be somewhat less price-elastic. But over the truly long run, when capital stocks turn over and consumer tastes change, demand rarely fails to move in response to prices -- although there obviously are exceptions.

4.23 Efficient pricing and production policies need not mean a general push for increased production. Instead of increasing production, improved resource allocation may well free resources for use in other sectors, as is indeed the aim of many a Bank-financed replanting or mine rehabilitation project. Nor do efficient policies need to exclude completely all production control arrangements, so long as demand is truly price-inelastic and all (present and potential) producers participate. But the scope for producers' action is limited. Diamonds offer the only example of a successful arrangement in the long run, but they have unique properties. Tin was another often-quoted example, but substitution in consumption and competition from outside producers overwhelmed the tin agreement in the long run. Now OPEC's success is under question.

4.24 For some countries and products, over some range in prices, some constraints on production may be justifiable for some time, particularly in the short run. For example, a country that produces a large share of a demand-inelastic product may rationally pay (or tax or otherwise influence) some farmers not to produce if it anticipates a bumper crop. It may thus mitigate large, temporary declines in export revenues. Groups of countries could consider a similar posture. But efforts to maintain artificially high prices over a long time are likely to fail. That makes it very important to support prices only if short-run fluctuations can be distinguished from long-run trends.

4.25 Because of the demand constraints facing commodity production, the faster development of other sectors must be encouraged. The record of failed attempts to develop by subsidizing industry and taxing agriculture is all too clear. Other government actions have also exacted high prices through inefficient resource allocation. Yet, governments inevitably affect resource allocation among sectors, if only in their traditional role as providers of education, transport, water systems, and the like. The allocation of such public resources across sectors and locations can help achieve the most desirable path for long-term development. Governments do have the means to encourage industrial development without impairing the efficiency of markets. The message of this paper is that they should use them.

4.26 The promotion of economic efficiency -- not just in the production of primary commodities but throughout the economy -- tends over the long run to reconcile the interests of individual primary-commodity producers with the collective interest of developing countries. That efficiency will lead to faster development, to accelerated growth in manufacturing and services, and to a growing relative importance of these sectors. Development, in turn, reduces the vulnerability of each developing country to the slow-growing demand and falling prices for commodities. General growth and development can also raise the demand for commodities and helps support their prices. That is why accelerated economic growth and development is the one hope for resolving the commodities policy dilemma -- and with it the commodities problem -- of developing countries.

## 5. ISSUES FOR THE BANK

5.1 For the Bank, the major issues concerning primary commodity markets have been its policy advice to member governments and its lending for projects designed to increase the production of primary commodities. In particular, the Bank has long struggled with the primary producers' dilemmas outlined in Chapter 4. The record of Bank lending, its policies concerning commodities facing inelastic demand or excess supply, and the broad policy perspective adopted by the Bank in its dealings with primary commodity producers are discussed following the section on their more short-term problems. These narrower issues are to be viewed in the perspective of the Bank's broader concern with development, and its conviction that broad-based development alone can resolve the commodity problem in the long term: by reducing countries' and people's dependence on primary commodities, and providing them with alternative means of incomes and export revenues.

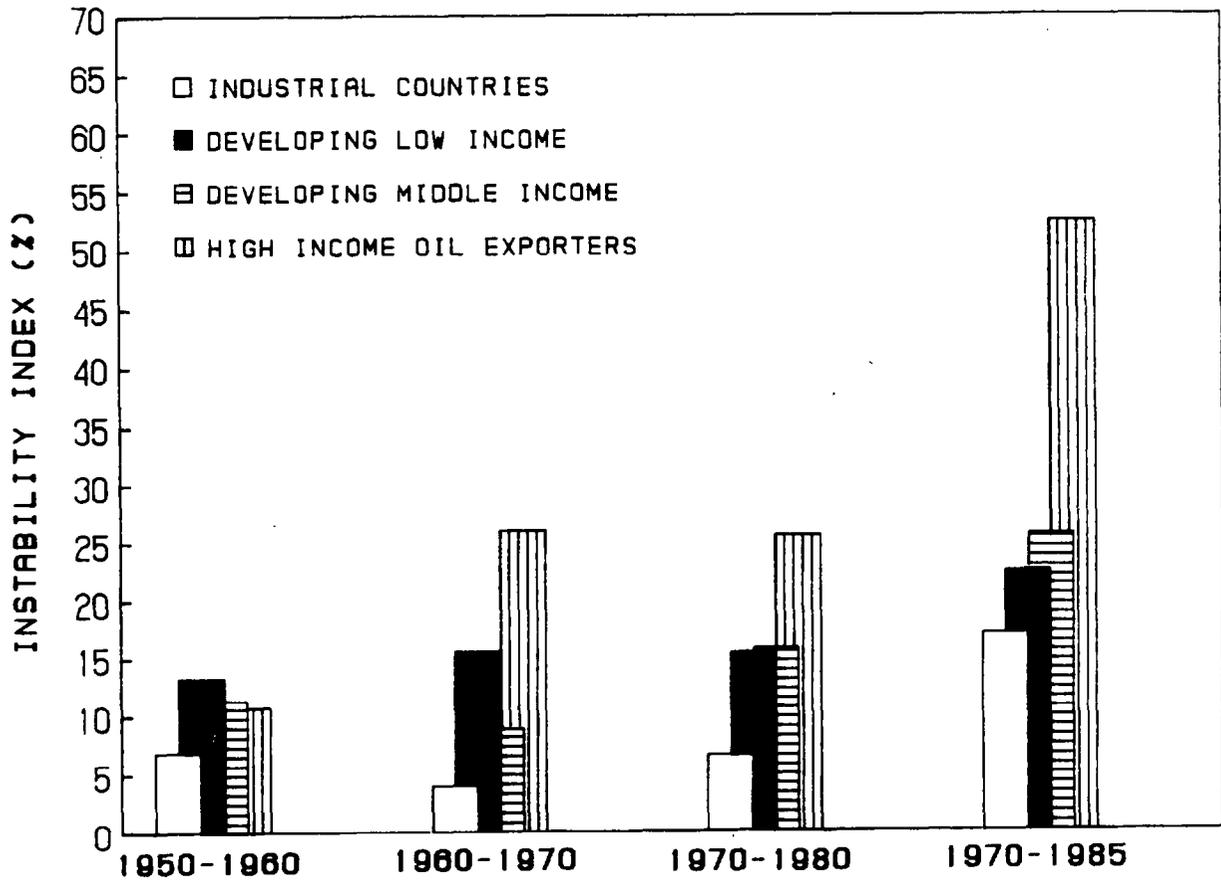
### Stabilizing Export Earnings

5.2 One immediate difficulty of developing countries that are highly dependent on primary commodities as a source of foreign exchange is the potential for large shortfalls in revenues as a result of sudden demand changes or supply fluctuations (owing, say, to bad weather). Revenue instability has persisted for most developing countries and for some of them it has even increased (Figure 5.1). Some stabilization of export revenues appears essential to good economic management, whatever the source of instability. External borrowing and other forms of managing external financial reserves have been effective ways of coping with revenue instability. But choosing from among these options requires the ability to distinguish short-term fluctuations from long-term trends, as do all other means of price and revenue stabilization, including commodity agreements.

5.3 The instability of export earnings has long been a serious concern of the international community, and mechanisms have been put in place to deal with some of the most important effects on developing countries that export primary commodities. The International Monetary Fund and the European Economic Community have operated compensatory financing schemes for many years. The Fund set up its Compensatory Financing Facility (CFF) in 1963 to assist developing countries in stabilizing their export earnings. The conditions of access to this facility were reviewed and liberalized several times in subsequent years. The coverage of the CFF was also extended in 1981 to compensate temporary excesses in cereal import costs.

5.4 For a country to make a drawing under the CFF, the export shortfall must be judged by the Fund to be temporary and attributable to circumstances largely beyond the country's control. The country must also undertake to cooperate with the Fund in efforts to find, where appropriate, solutions to its payments problems. Repayments are normally made in installments spread over the fourth and fifth year after the drawing. Since January 1984 the limit on the outstanding drawings has been set at 83 percent of a country's IMF quota.

FIGURE 5.1: EXPORT REVENUE INSTABILITY INDEX, 1950-1985



SOURCE: ECONOMIC ANALYSIS AND PROJECTIONS DEPARTMENT, WORLD BANK .

5.5 Comparatively little use was made of the CFF during 1963-75, when 57 drawings were made totaling SDR 1.2 billion. Following the 1975 liberalization, use of this facility has been more widespread. Over the 11 years from 1976 to 1986, 225 drawings were made totaling SDR 13.7 billion. This accelerated use in part reflects the increased instability in export earnings experienced in the late 1970s and early 1980s, compared with the 1960s and early 1970s (Figure 5.1). And in part it reflects a liberalization by the Fund of conditions of access to the facility, particularly by Fund decisions in 1975 and 1979. Use of the CFF was particularly large in the wake of the world economic recessions in 1975 and 1980-82. During the 1980s use of this facility has increasingly been associated with regular Fund programs, as shortfalls in export earnings in specific years for some Fund members have often occurred at the same time as more fundamental and less temporary balance-of-payments problems.

5.6 The Fund has also given support to countries facing unstable commodity prices through its Buffer Stock Financing Facility. Under this facility members in need of payments support are able to make drawings to cover their obligations for the buffer stocking provisions of international commodity agreements. Support is thus limited to international commodity agreements that use buffer stocks to stabilize prices. Since the Facility's introduction in 1969, 17 countries have made 39 drawings, totaling around SDR 500 million, with more than 80 percent of the drawings in 1982-83. Countries made these drawings to cover obligations under the 1979 International Rubber Agreement and the Fourth, Fifth, and Sixth International Tin Agreements. Less than SDR 50 million was outstanding at the end of 1986, as repayments have greatly outweighed new drawings in recent years.

5.7 The EEC established its compensatory financing scheme -- STABEX -- in 1975 under the first Lome Convention. The scheme's coverage, more limited than the Fund's, applies only to the associated African, Pacific, and Caribbean states (66 of them today). And unlike the Fund's facility, which aims at stabilizing fluctuations in total export revenue, STABEX is specific to commodities, compensating for the changes in revenue originating from them. The resources available to STABEX are fixed in advance and therefore subject to definite budgetary limits, but the recipient countries receive very favorable interest and repayment terms. The grant element in STABEX is estimated to be four times that in the Fund's facility. The use of STABEX funds is now being related to structural adjustment in recipient countries.

5.8 The Bank's actions mostly foster the stabilization of export earnings -- indirectly, by promoting economic growth and structural change -- including reduced dependence on primary commodity exports and reduced vulnerability to their fluctuations. The Bank does this by financing investments for infrastructure (transport, communication, irrigation) and directly productive capital; and by providing advice, and increasingly finance, to improve development policies. This second type of support has increasingly been associated with quick-disbursing structural and sectoral adjustment loans, which have recently accounted for about 15 percent of Bank (and IDA) lending. These loans, through the policy changes that they promote and the finance for critical inputs and investments that they provide, support restructuring programs aimed at fostering a country's sustained growth and increasing its resilience to external shocks.

5.9 On the policy side, the Bank has done much to improve incentive structures in developing countries. In agriculture, the Bank has argued for eliminating or reducing the effective subsidies that urban consumers often receive at the expense of farmers. Bank programs have frequently led to increases in farmgate prices -- either directly through setting domestic procurement prices in line with international prices or indirectly through lower taxes and removing restrictions on trade. The Bank has also promoted increased efficiency and cost reductions in fertilizer and seed distribution, notably through investments in new facilities to increase supplies and foster competition.

5.10 Such individual policies have to be seen in their overall context. They aim at promoting more efficient production and at creating the economic conditions needed for accelerated, diversified growth. Such growth will gradually increase the absolute and relative sizes of nonprimary sectors and thus steadily improve long-run market balances for primary commodities. Perhaps most important in this process for the Bank is its consistent advice and financial intervention in favor of outward-oriented policies and, more broadly, in favor of efficient price systems. Such policies help promote industrialization, and thereby boost global demand for primary commodities while reducing developing country dependence on them.

#### Lending for Primary Commodity Production

5.11 About 25 to 30 percent of the Bank's project lending has been to sectors producing primary commodities -- particularly agriculture, which provides a livelihood to the most people in the developing countries. The largest part of the agricultural population produces food, so foodgrain production has been the target of the largest number of Bank projects. Such production is all the more necessary because improved nutrition is one precondition of improved health and ultimately of development -- and because developing countries as a group have become increasingly dependent on food imports. The Bank's agricultural assistance, through policy advice and project lending, does not aim at self-sufficiency as a goal by itself, but at exploiting the possibilities for economical production. The food-importing countries clearly have an interest in increasing their production, if they can do this at a reasonable cost.

5.12 Although the bulk of the Bank's agricultural assistance has gone to food production, the share of such projects in increased world production is small. One reason for this is that food makes up a big part of the economies of developing countries. Another is the dominant role of industrial countries (and other nonborrowers) in food production. The Bank has contributed relatively more to increasing the production of such agricultural raw materials as cotton and rubber and such tropical products as cocoa and palm oil.

5.13 Beyond its general emphasis on economic diversification through the development and growth of nonprimary sectors, the Bank has sought to assist the diversification of primary production in economies excessively dependent

on one export commodity, be it agricultural or mineral. Thus, a recent Bank project in Colombia aims to double the land area devoted to commodities other than coffee. Another Bank project for agricultural rehabilitation, aimed at encouraging rapid growth in a range of agricultural exports, is reducing Zambia's almost total dependence on copper exports. A third is helping to reduce further Sri Lanka's dependence on rubber. Many other examples could be added to this list.

Table 5.1: BANK/IDA LENDING FOR PRIMARY COMMODITIES, 1976-86

	Total Lending Bank/IDA	Lending for Agriculture	(%)	Lending for Fertilizers & Chemicals	(%)	Lending for Oil, Gas & Coal	(%)
1976	6,632.4	1,627.6	24.5	228.0	3.4	0.0	0.0
1977	7,066.8	2,307.9	32.7	385.3	5.5	0.0	0.0
1978	8,410.7	3,269.7	38.9	0.0	0.0	0.0	0.0
1979	10,010.5	2,521.8	25.2	615.5	6.1	112.4	1.1
1980	11,481.7	3,458.4	30.1	176.5	1.5	457.0	4.0
1981	12,291.0	3,763.0	30.6	797.9	6.5	659.5	5.4
1982	13,015.9	3,078.4	23.7	111.0	0.9	766.3	5.9
1983	14,477.0	3,698.3	25.5	428.2	3.0	1,049.9	7.3
1984	15,522.3	3,472.9	22.4	307.0	2.0	864.1	5.6
1985	14,384.3	3,749.3	26.1	528.5	3.7	1,331.4	9.3
1986	16,318.7	4,777.4	29.3	442.2	2.7	231.1	1.4

#### Lending for Commodities Facing Inelastic Demand

5.14 From its inception, the Bank has recognized that overall demand for primary commodities was bound to increase slower than world income. So, except for developing countries in special circumstances, diversified growth away from dependence on primary commodities was a necessary part of development. The Bank did not seek to limit the production of primary commodities in general, and it did not take any strong position for or against commodity price stabilization or price support agreements.

5.15 Nevertheless, when international agreements were put in effect and enjoyed the widespread support and participation of its members, the Bank has observed the terms and conditions of such agreements in its lending. This policy of cooperation with existing international commodity agreements entered by its member countries was clearly reiterated in the 1969 decision of the

Table 5.2: ANNUAL INCREMENTAL PRODUCTION FROM BANK FINANCED PROJECTS  
OVER THE PERIOD FY74-86 (AS ESTIMATED AT APPRAISAL)

Commodity	Number of Projects /a	Estimated Annual Incremental Output	Share of World Production /b	
			1990	2000
		( '000 metric tons)	(-----%-----)	
Rice	304	16,813	3.2	
Wheat	156	12,506	2.2	
Maize	263	12,815	2.3	
Sorghum	121	5,910	7.7	
Millet	43	1,354	3.9	
Sugar	118	4,200	3.8	
Milk	153	8,907		
Groundnuts	125	1,969	8.5	
Soybeans	70	2,850	2.3	
Cotton Seed	111	3,545	12.0	
Cotton Lint	147	2,822	17.3	
Rubber	42	2,179		36.4
Palm Oil	36	1,832		13.1
Coffee	55	220		3.5
Cocoa	44	184		7.4
Tea	5	36		1.4
Tobacco	32	118	1.9	

/a Many agricultural projects are generally multipurpose, and project numbers are therefore not additive.

/b Owing to their different gestation lags, incremental production of annual crop projects is expressed as a percentage of forecast 1990 production, while incremental production of perennial crops is expressed as a percentage of forecast 2000 production.

Sources: World Bank, Monitoring and Evaluation Unit, Agriculture and Rural Development Department, for the estimated incremental output at full development. Economic Analysis and Projections Department, for forecasts of world production.

Bank's Board. 1/ For example, the Bank has made sure that its lending for coffee and sugar production does not lead to production in excess of quotas fixed under the International Coffee and Sugar Agreements. The Bank has also maintained consultations with all international commodity organizations on its project lending. So far, however, the small number of broad-based commodity agreements in operation has posed few questions about the compatibility of Bank lending with the objectives of such agreements.

5.16 In 1973 the Bank's Board took up the issue of appropriate Bank policies for investment in primary commodities facing inelastic demand. 2/ The aim of the policy guidelines then approved was to ensure that Bank resources would not be used to increase primary commodity production if the major impact was expected to reduce the collective net export earnings of developing countries. The guidelines were to apply to commodities that fulfilled two conditions. The first condition was that the demand facing them was truly price-inelastic over the long run -- and also income-inelastic. The second was that developing countries must dominate the exports of the commodity and be relatively unimportant in its import demand. The reasons for the first condition are obvious. The reasons for the second lie in the Bank's mandate to assist developing countries.

5.17 At the time, careful debate identified one commodity, tea, to which these conditions fully applied -- and one other, sugar, to which they partly applied and which had long had a specific lending policy. Financing for tea projects was to be avoided except for (a) increases in output in countries that did not have investment alternatives and (b) rehabilitations of existing productive capacity involving no increase in output.

5.18 For sugar, rather broad special guidelines have applied for lending since at least 1967. 3/ These distinguished between purely import-substitution projects and export-oriented projects that required special care to establish price-competitiveness and avoid market disruptions. The sugar guidelines were amended in 1978 to make them consistent with the International Sugar Agreement and its production quotas. 4/ Naturally, the applicability of these guidelines to particular commodities and countries must be kept under review as market conditions change. This means not just conditions concerning

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1/ IBRD, Stabilization of Prices of Primary Products: Report of the Executive Directors, Part II, Washington, D.C., 1969.

2/ IBRD, Development Policy for Countries Highly Dependent on Exports of Primary Products, Washington, D.C., January 1973.

3/ See IBRD, Sugar - A Reappraisal of Investment Policies for Developing Countries, SecM72-571, Washington, D.C., November 10, 1972.

4/ IBRD, The World Sugar Economy: Review and Outlook for Bank Lending, EPDCS, Washington, D.C., February 1978.

the particular commodities, but also those relating to financing and to alternative investment possibilities in various developing countries.

#### Commodities in Surplus Supply

5.19 In recent years, farm and mining interests in the industrial countries have questioned lending for commodities produced mainly in industrial countries and considered to be in surplus supply -- and for competing commodities. The agricultural commodities in question are mainly temperate products (grains, sugar, meats, dairy products) and vegetable fats and oils. Among the metals the main focus has been on copper, for which the developing countries' share of production has increased substantially. Similarly, some aspects of Bank structural adjustment lending have also been criticized. The reason is that the measures recommended to increase economic efficiency -- more appropriate pricing policies, more competitive exchange rates, and better management of public enterprises -- are seen also to lead to increased production and export of commodities, with consequent downward pressures on prices.

5.20 Obviously, when it comes to new investment, the Bank must consider its impact on future supplies. In evaluating projects, the Bank uses routinely forecasts of future equilibrium market prices. Whenever the project is so large to possibly affect expected market balances, its effect on prices is explicitly accounted for in the evaluation of the investment. Surplus supply is not only a difficult concept in practice, however; it is also one that must be given a precise time horizon. Overcapacity today does not mean permanent overcapacity over the life of any investment project. But it would not generally make sense, except under the special conditions set under the 1973 guidelines, to refrain from financing low-cost projects in developing countries merely because they compete with higher-cost production elsewhere. Whenever the expansion of supplies in lower cost areas is economical at expected future prices, the entry of new producers would add to the overall competitiveness of primary commodities (and reflect normal market behavior).

5.21 Adjustment difficulties are particularly difficult in mining industries and in plantation agriculture, particularly during prolonged periods of depressed demand and prices. The length of the investment cycle, the lumpiness of the investments, and the needed lead times all contribute to these difficulties. But it is not tenable to argue from a global economic viewpoint that, for the sake of adjustment, investment opportunities or policy reforms should be slowed or discouraged in the developing countries that most need them. Better economic policies and greater efficiency in production are essential for many developing countries in their quest to grow, to trade, and to shoulder their financial responsibilities -- conditions that will in turn go far to determine the stability and growth possibilities of the world economy.

TABLE A.1: SHARES IN PRODUCTION, CONSUMPTION, AND TRADE OF NONFUEL  
PRIMARY COMMODITIES BY MAIN ECONOMIC REGION, 1969/71-2000 /A

(PERCENTAGES)

	Actual			Forecasts	
	1969-71	1979-81	1984-86	1990	2000
<u>Developing countries /B</u>					
Production	49.0	53.3	52.9	54.4	55.8
Consumption	41.4	46.8	50.0	51.7	55.2
Exports	58.9	49.6	50.7	50.4	48.7
Imports	20.5	29.5	31.1	32.6	37.8
<u>Industrial countries</u>					
Production	36.2	33.4	33.2	31.9	31.2
Consumption	42.1	36.7	34.1	32.4	29.6
Exports	35.6	46.6	45.9	46.7	48.6
Imports	69.8	56.9	55.5	53.5	47.1
<u>East European economies</u>					
Production	14.8	13.3	13.9	13.8	13.1
Consumption	16.5	16.5	16.0	15.9	15.3
Exports	5.5	3.8	3.4	2.9	2.7
Imports	9.8	13.6	13.4	14.0	15.1

/A Refers to 29 commodities included in World Bank forecasts (see Table A.2).

/B For country classification see Table A.22.

Source: Economic Analysis and Projections Department, World Bank.

TABLE A.2: SHARE OF NONFUEL PRIMARY COMMODITIES PRODUCTION BY MAIN ECONOMIC REGIONS, 1969/71-2000

COMMODITY	DEVELOPING COUNTRIES					INDUSTRIAL COUNTRIES					EAST EUROPEAN COUNTRIES				
	1969-71	1979-81	1984-86	1990	2000	1969-71	1979-81	1984-86	1990	2000	1969-71	1979-81	1984-86	1990	2000
	(%)														
TOTAL NONFUEL COMMODITIES	48.99	53.34	52.86	54.39	55.77	36.22	33.36	33.23	31.86	31.18	14.79	13.30	13.91	13.75	13.05
AGRICULTURE	54.03	58.12	57.27	58.29	59.21	32.15	29.80	30.08	29.20	29.11	13.82	12.08	12.65	12.51	11.68
FOOD	53.09	57.46	55.64	57.00	57.62	33.16	30.73	31.71	30.57	30.75	13.76	11.82	12.66	12.44	11.63
BEVERAGES	98.71	98.74	98.33	98.01	97.46	0.24	0.18	0.21	0.20	0.17	1.05	1.08	1.46	1.79	2.37
COCOA	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COFFEE	99.64	99.74	99.70	99.72	99.75	0.36	0.26	0.30	0.28	0.25	0.00	0.00	0.00	0.00	0.00
TEA	93.60	91.19	90.67	89.54	88.06	0.00	0.00	0.06	0.05	0.04	6.40	8.81	9.27	10.41	11.90
CEREALS	61.53	64.33	59.14	62.52	63.27	24.76	24.20	27.85	25.33	25.89	13.70	11.47	13.00	12.15	10.84
WHEAT	31.44	37.19	41.75	43.26	44.87	33.36	36.41	36.08	35.47	38.16	35.19	26.40	22.17	21.27	16.37
RICE	92.65	93.65	94.42	95.05	96.06	6.88	5.68	4.91	4.17	3.06	0.47	0.68	0.66	0.78	0.99
COARSE GRAINS	35.97	36.28	35.39	36.19	35.76	44.79	46.30	46.06	44.72	45.55	19.24	17.42	18.55	19.09	18.69
OTHER FOOD	33.77	39.22	39.00	42.78	43.74	49.03	44.39	43.84	40.72	39.92	17.20	16.39	17.16	16.50	16.34
SUGAR	53.77	58.04	60.40	63.78	67.44	28.51	29.06	25.46	23.20	20.79	17.72	12.91	14.14	13.02	11.77
BEEF	29.67	31.05	32.10	33.30	35.74	51.49	49.22	47.65	46.78	44.66	18.84	19.73	20.26	19.92	19.60
BANANAS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORANGES	50.45	56.95	65.50	64.99	64.34	49.30	42.44	33.63	34.15	34.78	0.25	0.62	0.87	0.86	0.87
FATS AND OILS	52.03	51.33	57.23	54.60	55.68	47.07	47.81	42.02	44.59	43.57	0.90	0.86	0.76	0.81	0.75
PALM OIL	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COCONUT OIL	98.80	98.88	99.09	99.10	99.09	1.20	1.12	0.91	0.90	0.91	0.00	0.00	0.00	0.00	0.00
GROUNDNUT OIL	91.90	90.97	89.92	91.15	91.31	8.09	8.99	10.04	8.79	8.61	0.01	0.04	0.04	0.06	0.08
SOYBEAN OIL	26.42	33.91	39.06	39.24	41.13	72.14	64.90	59.84	59.65	57.86	1.44	1.19	1.11	1.10	1.01
SOYBEAN MEAL	26.41	33.92	39.18	39.24	41.13	72.14	64.90	59.71	59.65	57.86	1.44	1.19	1.12	1.10	1.01
AGRICULTURE NONFOOD	61.58	62.55	67.48	67.49	69.81	24.07	23.65	19.92	19.45	18.19	14.35	13.81	12.60	13.06	12.00
COTTON	63.54	59.13	67.44	66.86	68.25	18.87	21.81	17.68	16.08	16.39	17.59	19.06	14.88	17.06	15.36
JUTE	98.39	98.69	98.74	98.94	99.12	0.00	0.00	0.00	0.00	0.00	1.61	1.31	1.26	1.06	0.88
RUBBER	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TOBACCO	60.35	64.19	72.04	72.76	77.66	28.12	24.91	17.87	16.10	11.34	11.53	10.90	10.09	11.14	11.00
TIMBER	48.30	58.38	60.45	60.76	62.96	35.02	28.26	25.54	25.96	25.04	16.68	13.36	14.01	13.29	11.99
METALS AND MINERALS	30.29	32.60	34.10	36.67	39.87	51.35	48.79	46.63	43.96	40.74	18.36	18.61	19.27	19.38	19.39
COPPER	34.17	37.52	41.47	44.52	47.40	48.44	42.58	38.63	34.26	30.47	17.39	19.90	19.91	21.22	22.13
IRON ORE	34.17	39.20	43.43	46.67	49.00	39.83	34.07	28.62	26.21	25.03	26.00	26.73	27.95	27.12	25.96
TIN	80.45	82.98	80.37	85.34	85.06	14.09	8.94	9.72	4.97	3.96	5.45	8.09	9.91	9.69	10.98
NICKEL	7.75	17.50	19.64	22.11	25.32	69.01	57.47	52.46	50.53	48.33	23.24	25.04	27.90	27.37	26.35
BAUXITE	60.92	55.43	51.27	52.49	52.48	25.33	33.65	38.08	37.13	37.54	13.75	10.92	10.65	10.38	9.98
ALUMINUM	18.09	20.86	24.63	28.85	32.68	64.47	63.40	58.47	54.49	50.97	17.44	15.73	16.89	16.65	16.35
LEAD	22.83	24.32	25.62	27.33	29.16	57.69	55.09	53.35	51.27	48.37	19.47	20.59	21.04	21.41	22.47
ZINC	18.67	22.22	24.75	25.45	28.04	61.84	55.46	54.98	53.81	51.03	19.49	22.32	20.27	20.74	20.93
PHOSPHATE ROCK	34.71	42.73	45.51	46.12	51.81	43.45	38.79	32.42	32.68	28.80	21.85	18.48	22.06	21.21	19.39

NA - NOT AVAILABLE.

SOURCE: ECONOMIC ANALYSIS AND PROJECTIONS DEPARTMENT, WORLD BANK.

TABLE A.3: SHARE OF NONFUEL PRIMARY COMMODITIES CONSUMPTION BY MAIN ECONOMIC REGIONS, 1969/71-2000

COMMODITY	DEVELOPING COUNTRIES					INDUSTRIAL COUNTRIES					EAST EUROPEAN COUNTRIES				
	1969-71	1979-81	1984-86	1990	2000	1969-71	1979-81	1984-86	1990	2000	1969-71	1979-81	1984-86	1990	2000
	(\$)														
TOTAL NONFUEL COMMODITIES	41.35	46.77	49.97	51.70	55.18	42.11	36.71	34.07	32.40	29.56	16.54	16.52	15.96	15.91	15.27
AGRICULTURE	46.20	51.93	54.84	56.17	59.23	37.73	32.41	30.24	29.01	26.61	16.07	15.66	14.92	14.82	14.16
FOOD	47.18	51.78	54.49	55.62	58.49	36.93	32.36	30.53	29.42	27.19	15.90	15.86	14.98	14.96	14.33
BEVERAGES	29.40	30.91	32.01	32.68	34.56	64.07	61.28	59.21	57.96	55.47	6.53	7.81	8.78	9.37	9.97
COCOA	12.07	14.44	14.82	15.50	16.86	72.35	68.43	68.12	65.55	64.17	15.57	17.11	17.06	18.95	18.97
COFFEE	30.54	29.47	30.36	30.59	31.35	65.71	66.25	64.73	64.43	63.27	3.76	4.28	4.90	4.98	5.37
TEA	50.90	59.69	62.53	64.81	67.77	38.76	25.67	21.05	18.16	14.07	10.34	14.65	16.42	17.03	18.16
CEREALS	58.66	63.07	65.54	66.48	69.49	24.34	20.48	19.81	18.78	16.95	17.00	16.44	14.66	14.74	15.56
WHEAT	38.73	48.56	52.64	55.34	60.83	24.89	19.66	21.24	19.58	17.80	36.38	31.78	26.12	25.08	21.37
RICE	92.69	93.89	94.87	95.49	96.80	6.64	5.06	4.28	3.63	2.34	0.67	1.05	0.85	0.88	0.85
COARSE GRAINS	35.04	38.28	38.68	38.65	39.45	45.00	40.15	39.21	38.14	36.80	19.96	21.57	22.11	23.21	23.75
OTHER FOOD	31.92	37.31	39.37	40.97	43.32	50.58	44.60	42.32	40.93	38.42	17.50	18.09	18.31	18.10	18.27
SUGAR	40.45	49.93	55.35	57.81	57.50	40.29	31.35	25.75	24.00	22.05	19.26	18.72	18.90	18.20	20.45
BEEF	28.17	31.37	31.20	32.50	35.91	52.99	48.40	48.34	46.98	43.82	18.83	20.23	20.47	20.52	20.27
BANANAS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORANGES	43.80	52.37	61.45	60.96	60.84	54.32	45.40	36.29	36.67	36.55	1.88	2.24	2.26	2.36	2.61
FATS AND OILS	46.28	45.14	49.88	49.76	50.18	51.12	48.94	43.79	43.31	42.36	2.60	5.92	6.33	6.93	7.46
PALM OIL	67.66	77.15	82.37	83.80	86.58	31.95	20.06	13.66	12.51	10.30	0.39	2.78	3.97	3.69	3.11
COCONUT OIL	56.30	58.15	64.16	68.78	71.57	42.13	38.91	32.96	28.26	25.69	1.57	2.94	2.88	2.96	2.74
GROUNDNUT OIL	81.85	83.76	85.36	86.98	88.72	17.82	15.89	14.24	12.66	10.96	0.33	0.34	0.39	0.36	0.31
SOYBEAN OIL	36.05	44.01	49.54	48.03	49.30	61.61	51.59	45.75	46.72	43.49	2.33	4.40	4.71	5.25	5.20
SOYBEAN MEAL	26.47	27.22	30.39	30.18	31.70	69.01	63.55	59.77	59.06	56.74	4.51	9.23	9.84	10.76	11.55
AGRICULTURE NONFOOD	40.59	52.85	57.05	59.83	64.74	42.34	32.68	28.37	26.29	22.32	17.07	14.48	14.57	13.89	12.94
COTTON	47.78	60.50	63.41	67.01	71.73	32.29	21.37	19.26	16.82	13.25	19.94	18.12	17.33	16.17	15.03
JUTE	56.77	74.06	79.14	79.61	81.68	36.27	18.12	13.41	12.60	10.50	6.96	7.82	7.45	7.79	7.82
RUBBER	25.79	36.23	38.12	40.21	47.07	58.71	52.64	52.57	51.63	45.90	15.50	11.13	9.31	8.16	7.02
TOBACCO	49.08	54.85	59.20	62.03	69.69	38.33	32.49	27.47	23.91	16.07	12.59	12.66	13.33	14.06	14.24
TIMBER	35.07	49.10	54.14	56.52	60.48	47.96	37.58	31.85	30.20	27.38	16.97	13.32	14.01	13.28	12.14
METALS AND MINERALS	18.60	23.37	26.51	29.31	32.82	62.67	56.21	52.54	49.35	45.80	18.73	20.42	20.95	21.34	21.38
COPPER	23.95	28.34	31.79	35.22	39.35	58.49	51.78	48.30	43.27	38.90	17.56	19.88	19.90	21.51	21.75
IRON ORE	14.01	20.00	24.54	28.05	32.87	59.60	50.40	44.16	41.74	38.06	26.39	29.59	31.30	30.20	29.07
TIN	44.12	51.55	47.74	53.66	55.79	45.93	35.18	35.85	30.63	27.13	9.95	13.27	16.41	15.71	17.07
NICKEL	5.44	7.96	10.39	12.36	14.15	74.75	68.29	65.59	63.04	61.00	19.81	23.75	24.01	24.60	24.85
BAUXITE	23.70	25.01	23.99	28.64	34.20	59.58	60.44	59.36	55.40	50.60	16.72	14.54	16.66	15.96	15.20
ALUMINUM	8.69	15.03	19.76	21.68	24.06	72.61	67.33	62.25	60.62	57.92	18.70	17.64	17.99	17.70	18.02
LEAD	15.50	19.77	21.26	23.15	24.87	63.81	57.16	56.03	53.65	50.80	20.70	23.07	22.71	23.20	24.32
ZINC	11.77	17.98	21.91	23.02	26.79	69.39	58.77	55.98	54.72	50.72	18.84	23.25	22.11	22.26	22.48
PHOSPHATE ROCK	15.42	26.47	31.73	34.83	42.44	62.04	51.28	42.51	40.26	34.88	22.54	22.25	25.76	24.91	22.68

NA - NOT AVAILABLE.

SOURCE: ECONOMIC ANALYSIS AND PROJECTIONS DEPARTMENT, WORLD BANK.

TABLE A.4: SHARE OF NONFUEL PRIMARY COMMODITIES EXPORTS BY MAIN ECONOMIC REGIONS, 1969/71-2000

COMMODITY	DEVELOPING COUNTRIES					INDUSTRIAL COUNTRIES					EAST EUROPEAN COUNTRIES				
	1969-71	1979-81	1984-86	1990	2000	1969-71	1979-81	1984-86	1990	2000	1969-71	1979-81	1984-86	1990	2000
(\$)															
TOTAL NONFUEL COMMODITIES	58.85	49.62	50.72	50.41	48.72	35.63	46.60	45.92	46.66	48.61	5.52	3.78	3.37	2.93	2.66
AGRICULTURE	61.32	50.09	51.67	50.92	48.32	33.48	46.87	45.52	46.65	49.41	5.20	3.04	2.82	2.42	2.27
FOOD	54.79	44.98	47.15	47.08	45.13	40.43	53.28	50.79	51.12	53.22	4.77	1.73	2.06	1.79	1.65
BEVERAGES	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COCOA	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
COFFEE	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TEA	100.00	100.00	100.00	100.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
CEREALS	21.83	17.87	20.75	20.19	19.30	69.71	80.20	76.45	77.47	78.73	8.46	1.93	2.80	2.34	1.97
WHEAT	4.34	6.05	8.51	10.34	10.33	82.05	91.51	87.77	86.56	87.22	13.61	2.45	3.73	3.10	2.45
RICE	64.35	61.07	70.96	69.20	65.89	34.44	37.77	27.75	29.28	32.68	1.22	1.16	1.29	1.52	1.43
COARSE GRAINS	27.50	17.45	20.61	17.55	17.37	68.42	81.02	77.42	80.91	81.26	4.08	1.54	1.96	1.54	1.37
OTHER FOOD	63.16	51.43	48.17	51.33	54.32	30.14	44.70	47.82	45.04	42.02	6.71	3.87	4.01	3.63	3.66
SUGAR	72.07	67.12	64.96	66.21	71.31	18.41	30.39	31.98	31.41	26.48	9.52	2.50	3.06	2.38	2.21
BEEF	39.99	19.46	24.22	31.40	32.39	52.89	73.10	69.54	62.77	61.40	7.11	7.44	6.24	5.83	6.21
BANANAS	92.58	93.85	92.33	92.66	93.21	7.40	6.15	7.67	7.34	6.79	0.02	0.00	0.00	0.00	0.00
ORANGES	57.12	57.44	54.34	56.28	58.08	42.77	42.54	45.62	43.69	41.90	0.12	0.02	0.04	0.03	0.02
FATS AND OILS	32.23	40.25	44.90	45.98	46.44	67.71	59.72	55.09	54.01	53.55	0.01	0.00	0.00	0.00	0.00
PALM OIL	96.31	96.59	97.23	96.81	97.55	3.69	3.41	2.77	3.19	2.45	0.00	0.00	0.00	0.00	0.00
COCONUT OIL	92.60	94.06	92.97	93.55	94.67	7.40	5.94	7.03	6.45	5.33	0.00	0.00	0.00	0.00	0.00
GROUNDNUT OIL	88.24	74.15	72.47	72.09	69.34	11.67	25.82	27.49	27.91	30.66	0.09	1.03	0.04	0.00	0.00
SOYBEAN OIL	5.58	22.60	27.46	30.22	30.54	94.42	77.40	72.54	69.78	69.46	0.00	0.00	0.00	0.00	0.00
SOYBEAN MEAL	8.93	28.77	34.79	36.92	37.10	90.97	71.18	65.18	63.07	62.89	0.00	0.00	0.00	0.00	0.00
AGRICULTURE NONFOOD	80.75	71.12	74.59	72.32	70.14	12.79	20.45	18.77	21.74	23.36	6.46	8.43	6.64	5.94	6.50
COTTON	67.72	44.54	56.89	54.59	53.70	19.08	36.16	27.79	32.37	31.38	13.20	19.30	15.33	13.03	14.91
JUTE	95.23	96.91	97.67	97.83	98.73	4.43	3.09	2.33	2.17	1.27	0.33	0.00	0.00	0.00	0.00
RUBBER	98.62	98.79	98.50	98.89	99.15	1.38	1.21	1.50	1.11	0.85	0.00	0.00	0.00	0.00	0.00
TOBACCO	52.68	55.60	59.37	62.16	59.29	34.83	35.65	35.90	33.51	37.17	12.48	8.76	5.13	4.32	3.54
TIMBER	94.85	92.69	88.12	81.59	73.51	4.44	6.43	11.01	17.26	25.86	0.71	0.88	0.87	1.15	0.63
METALS AND MINERALS	51.94	48.23	47.76	48.70	50.28	41.65	45.78	47.16	46.67	45.53	6.41	5.99	5.08	4.63	4.19
COPPER	61.48	59.62	63.56	63.48	63.91	33.85	32.92	31.66	33.23	33.25	4.67	7.46	4.78	3.29	2.84
IRON ORE	46.74	49.12	50.96	53.50	53.45	42.28	42.18	40.83	38.04	39.31	10.99	8.70	8.21	8.45	7.24
TIN	85.20	84.78	86.05	89.88	93.43	14.80	15.22	13.95	10.12	6.57	0.00	0.00	0.00	0.00	0.00
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BAUXITE	83.32	79.43	81.40	78.71	77.89	14.22	19.02	17.22	19.79	20.53	2.45	1.55	1.38	1.50	1.58
ALUMINUM	33.03	28.96	27.92	31.48	37.58	58.15	64.12	65.64	62.44	56.90	8.82	6.92	6.44	6.08	5.52
LEAD	39.33	33.58	34.44	36.35	36.78	56.65	65.72	65.06	63.02	62.57	4.02	0.70	0.50	0.63	0.65
ZINC	31.05	25.95	24.93	25.56	25.72	65.26	72.06	73.92	73.17	72.92	3.69	1.98	1.16	1.27	1.36
PHOSPHATE ROCK	57.04	64.72	68.06	68.32	70.45	27.99	26.24	23.43	24.64	23.24	14.97	9.04	8.51	7.04	6.31

NA - NOT AVAILABLE.

SOURCE: ECONOMIC ANALYSIS AND PROJECTIONS DEPARTMENT, WORLD BANK.

TABLE A.5: SHARE OF NONFUEL PRIMARY COMMODITIES IMPORTS BY MAIN ECONOMIC REGIONS, 1969/71-2000

COMMODITY	DEVELOPING COUNTRIES					INDUSTRIAL COUNTRIES					EASTERN EUROPEAN COUNTRIES				
	1969-71	1979-81	1984-86	1990	2000	1969-71	1979-81	1984-86	1990	2000	1969-71	1979-81	1984-86	1990	2000
-----(\$)-----															
TOTAL NONFUEL COMMODITIES	20.45	29.49	31.07	32.56	37.83	69.77	56.89	55.51	53.47	47.06	9.77	13.62	13.42	13.96	15.11
AGRICULTURE	24.84	34.62	35.75	37.21	42.11	64.97	50.54	49.52	47.36	41.03	10.19	14.85	14.73	15.43	16.86
FOOD	25.26	34.09	36.17	37.34	42.16	65.48	49.96	48.55	46.61	40.19	9.26	15.95	15.28	16.05	17.66
BEVERAGES	8.96	11.47	12.82	14.44	16.11	83.53	80.31	77.42	75.26	72.43	7.51	8.22	9.77	10.30	11.47
COCOA	5.44	6.74	7.70	10.71	13.60	77.39	75.36	72.96	68.01	61.87	17.17	17.90	19.33	21.28	24.53
COFFEE	7.06	8.43	9.75	10.86	11.41	87.92	86.01	83.80	82.74	81.66	5.03	5.56	6.44	6.39	6.93
TEA	32.69	43.00	45.46	49.11	54.39	61.19	45.67	40.73	37.28	31.37	6.12	11.32	13.81	13.61	14.24
CEREALS	47.81	51.03	54.79	56.00	61.22	40.96	26.71	23.67	22.26	16.80	11.24	22.26	21.54	21.74	21.98
WHEAT	53.94	59.39	59.92	65.08	70.17	51.38	18.66	16.72	15.16	11.21	12.68	21.95	23.37	19.76	18.62
RICE	83.43	79.38	80.95	78.90	78.58	8.90	10.80	12.06	12.03	10.63	7.68	9.82	6.99	9.07	10.79
COARSE GRAINS	16.29	29.98	37.54	35.19	39.66	73.05	42.89	38.50	35.90	28.54	10.66	27.13	24.16	28.91	31.80
OTHER FOOD	18.45	29.52	28.96	28.73	31.77	71.02	54.41	56.86	55.79	48.57	10.53	16.07	14.18	15.48	19.66
SUGAR	27.20	41.26	45.71	44.32	36.55	58.13	37.73	33.42	34.34	31.57	14.67	21.01	20.87	21.34	31.88
BEEF	10.95	22.11	20.02	20.88	31.51	81.88	63.98	68.91	65.56	55.07	7.16	13.91	11.07	13.56	13.42
BANANAS	9.80	13.31	10.12	11.09	13.51	88.33	82.81	87.47	86.26	82.98	1.87	3.89	2.41	2.65	3.52
ORANGES	9.96	18.17	18.72	20.86	29.29	78.38	67.95	68.80	65.85	56.43	11.65	13.88	12.48	13.30	14.27
FATS AND OILS	16.42	27.60	33.56	33.84	36.38	78.75	62.03	55.84	54.68	51.72	4.83	10.36	10.60	11.48	11.90
PALM OIL	30.02	60.36	69.63	70.11	77.12	69.18	35.24	24.18	23.81	18.14	0.80	4.40	6.20	6.08	4.74
COCONUT OIL	13.15	17.26	17.07	15.70	18.95	83.93	77.14	76.75	76.69	73.50	2.92	5.60	6.18	7.60	7.55
GROUNDNUT OIL	13.87	14.20	21.12	26.99	40.73	83.65	83.26	74.81	69.48	55.91	2.47	2.54	4.07	3.53	3.36
SOYBEAN OIL	29.54	41.80	46.22	45.12	46.02	68.00	51.86	47.32	47.54	46.42	2.47	6.35	6.46	7.34	7.56
SOYBEAN MEAL	9.33	16.82	21.11	21.80	22.74	83.17	68.77	64.71	63.09	61.29	7.49	14.41	14.18	15.10	15.98
AGRICULTURE NONFOOD	23.59	36.69	33.70	36.52	41.75	63.45	52.80	54.28	51.50	46.67	12.95	10.51	12.02	11.98	11.58
COTTON	29.59	49.56	43.87	47.26	53.74	50.46	35.45	38.04	35.32	30.27	19.95	14.99	18.10	17.41	15.98
JUTE	30.92	54.38	65.62	61.09	67.68	59.66	28.80	20.99	18.91	11.45	9.43	16.82	13.39	20.00	20.87
RUBBER	20.40	25.77	26.53	27.27	32.17	63.25	61.48	62.64	62.95	58.94	16.34	12.75	10.83	9.78	8.89
TOBACCO	15.32	22.56	20.18	24.59	29.40	69.99	63.05	65.28	61.20	57.55	14.69	14.39	14.53	14.21	13.06
TIMBER	21.63	35.39	33.36	37.99	44.03	76.89	63.53	65.22	60.47	51.79	1.48	1.08	1.41	1.55	4.18
METALS AND MINERALS	8.16	13.65	16.56	17.16	21.05	83.24	76.54	74.09	73.72	70.73	8.61	9.81	9.35	9.12	8.22
COPPER	7.59	15.16	17.62	19.21	23.97	87.26	79.92	77.55	75.80	74.43	5.15	4.92	4.83	4.99	1.60
IRON ORE	0.83	7.01	10.00	13.84	16.29	87.62	78.85	74.92	71.13	69.31	11.55	14.15	15.08	15.02	14.40
TIN	13.00	14.78	18.19	17.86	23.36	78.92	72.91	69.61	68.45	62.04	8.07	12.32	12.20	13.69	14.60
NICKEL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BAUXITE	1.61	1.57	8.09	5.41	7.83	89.54	87.59	74.42	75.94	70.60	8.85	10.83	17.49	18.64	21.57
ALUMINUM	7.90	14.89	18.20	15.97	19.71	80.79	74.07	73.39	76.20	71.85	11.31	11.04	8.41	7.83	8.44
LEAD	10.07	12.41	13.65	16.93	16.57	82.13	76.95	77.44	74.11	74.05	7.80	10.64	8.91	8.96	9.38
ZINC	12.76	15.61	16.57	18.21	21.95	84.45	81.19	76.94	75.91	71.98	2.78	3.20	6.49	5.88	6.07
PHOSPHATE ROCK	16.73	21.11	23.53	29.19	34.05	66.85	59.74	56.17	50.93	46.85	16.41	19.15	20.30	19.88	19.10

NA - NOT AVAILABLE.

SOURCE: ECONOMIC ANALYSIS AND PROJECTIONS DEPARTMENT, WORLD BANK.

TABLE A.6: EXPORT GROWTH AND SHARES BY MAJOR COUNTRY GROUPS, 1965-86 /A

	Shares				Growth Rates (Constant 1980 US\$) /C		
	1965	1973	1980	1986	1965-63	1973-80	1980-86
Total export value (US\$b) (Percentage shares) /B	162.3 (100.0)	509.2 (100.0)	1,788.7 (100.0)	1,919.9 100.0	8.8	4.4	2.7
Developing countries	20.6	18.0	21.0	21.3	4.9	4.7	4.3
Low-income economies	4.8	3.2	2.4	2.9	2.0	4.7	5.4
Middle-income economies	15.8	14.8	18.6	18.4	5.3	4.8	4.2
High-income oil exporters	2.5	4.0	10.4	12.4	12.8	-0.6	-11.5
Industrial countries	76.9	78.0	68.6	76.2	9.4	5.4	3.7
Memo:							
Highly-indebted economies	8.0	6.3	7.2	5.5	3.1	1.1	1.3
Sub-Saharan Africa	2.8	2.4	2.7	1.4	15.0	0.1	-1.9
Nonoil primary commodities (US\$b) (Percentage shares) /B	55.7 (100.0)	138.2 (100.0)	354.9 (100.0)	351.9 (100.0)	4.8	5.6	1.0
Developing countries	39.3	33.3	32.4	29.1	3.2	4.0	1.6
Low-income economies	9.7	7.4	5.8	5.2	1.9	1.1	0.9
Middle-income economies	29.6	25.9	26.7	23.9	3.6	4.7	1.7
High-income oil exporters	0.3	0.1	0.2	0.3	-4.2	15.1	5.4
Industrial countries	60.4	66.6	67.3	70.6	5.8	6.4	0.8
Memo:							
Highly-indebted economies	15.4	12.9	12.8	11.8	2.6	4.7	1.2
Sub-Saharan Africa	7.1	5.8	4.7	4.1	2.5	0.6	0.1
Fuels (US\$b) (Percentage share)	12.7 (100.0)	47.6 (100.0)	382.4 (100.0)	148.6 (100.0)	6.8	8.7	-2.7
Developing countries	36.6	28.9	30.4	35.1	4.0	-0.7	1.1
Low-income economies	0.9	0.5	1.5	2.7	0.9	11.2	10.0
Middle-income economies	35.7	28.3	28.9	32.4	4.1	-1.1	0.5
High-income oil exporters	29.7	41.7	47.4	30.3	12.8	-0.9	-11.8
Industrial countries	33.8	29.5	22.3	34.6	8.1	4.2	5.4
Memo:							
Highly-indebted economies	24.0	16.7	15.0	15.0	2.3	-3.1	-1.1
Sub-Saharan Africa	2.0	6.7	7.7	5.9	29.9	-0.4	-3.8

/A For country classification see Table A.22.

/B The total of 100 percent is obtained by adding the following regions: (a) developing countries (90); (b) high-income oil exporters; and (c) industrial countries.

/C Annual average growth rates calculated using the least squares method.

Source: Economic Analysis and Projections Department, World Bank.

TABLE A.7: SUPPLY OF NON-FUEL PRIMARY COMMODITIES, 1981-86

(PERCENTAGE CHANGE)

	Nonfuel Primary Commodities		Food		Beverages		Agricultural Raw Materials		Metals	
	Stocks /A	Production	Stocks /A	Production	Stocks /A	Production	Stocks /A	Production	Stocks /A	Production
1981	5.8	3.0	1.8	4.1	24.1	9.4	1.9	1.6	5.0	-0.9
1982	15.6	-0.8	9.8	5.0	33.8	-13.3	10.3	0.3	16.6	-6.6
1983	10.9	-0.5	17.0	-3.8	-8.7	5.6	5.3	2.1	19.4	1.1
1984	-9.4	7.6	-16.0	7.9	-7.4	10.1	-0.5	7.5	-1.2	5.2
1985	10.3	1.2	21.9	1.7	-3.3	3.3	32.5	-0.4	-12.5	0.9
1986	13.9	-0.3	23.1	2.8	19.6	-8.7	6.7	-0.7	-7.6	-1.3

/A Beginning stocks.

Source: International Monetary Fund.

TABLE A.8: NONFUEL PRIMARY COMMODITY PRICES IN RELATION TO EXPORT UNIT VALUES OF PETROLEUM AND MANUFACTURES, 1960-86

(INDICES: 1980=100)

	Nominal Prices in U.S. Dollars						Real Commodity Prices /D		
	Commodities /A			Export unit values			World	Industrial countries	Developing countries
	World	Industrial countries	Developing countries /E	Petroleum /B	Manufactures /C				
1960-69	33.2	33.9	30.5	5.4	31.0	107.2	109.5	98.5	
1970-79	63.4	64.4	61.6	28.3	58.0	109.8	112.4	105.0	
1980-86	84.6	85.6	83.5	90.2	93.9	90.4	91.4	89.2	
1970	37.1	37.4	33.5	5.4	34.8	106.6	107.4	96.1	
1971	36.2	37.6	31.9	6.4	36.6	98.8	102.9	87.1	
1972	38.8	41.1	36.1	7.5	39.6	98.0	103.8	91.1	
1973	63.1	69.7	55.4	10.5	46.5	135.8	150.0	119.2	
1974	76.3	80.3	71.4	34.2	56.0	136.3	143.5	127.5	
1975	63.9	67.7	59.2	35.9	63.5	100.7	106.7	93.3	
1976	69.3	69.8	68.8	38.2	63.7	108.9	109.6	108.1	
1977	76.7	69.9	84.9	41.7	69.2	110.8	100.9	122.6	
1978	77.8	75.7	80.4	41.9	79.8	97.5	94.8	100.7	
1979	94.5	94.3	94.8	61.1	90.6	104.3	104.1	104.6	
1980	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	
1981	89.9	92.7	86.5	109.8	95.3	94.4	97.3	90.8	
1982	80.6	82.7	77.9	105.1	93.1	86.6	88.9	83.7	
1983	85.6	87.6	83.3	93.1	90.2	94.9	97.1	92.3	
1984	87.4	88.1	86.7	90.8	87.2	100.3	101.0	99.4	
1985	76.0	76.4	75.6	86.9	88.1	86.3	86.7	85.8	
1986	72.9	71.4	74.5	45.6	103.5	70.4	69.0	72.0	
1984 I	91.0	91.3	90.6	91.3	89.2	102.0	102.4	101.6	
II	92.7	93.7	91.6	91.2	89.4	103.7	104.8	102.4	
III	84.8	85.6	83.8	90.8	86.0	98.6	99.6	97.5	
IV	81.3	81.6	80.9	90.1	84.3	99.4	96.8	95.9	
1985 I	79.1	79.5	78.5	88.8	82.2	96.3	96.8	95.6	
II	77.7	78.0	77.2	86.7	85.7	90.6	91.0	90.1	
III	73.0	73.5	72.4	85.9	89.6	81.5	82.0	80.8	
IV	74.4	74.5	74.3	86.2	94.9	78.4	78.5	78.2	
1986 I	77.7	75.7	79.9	61.1	100.5	77.3	75.4	79.5	
II	74.5	73.8	75.1	40.3	104.0	71.6	71.0	72.2	
III	69.8	68.1	71.8	36.5	104.5	66.8	65.2	68.7	
IV	69.5	68.0	71.3	43.0	105.0	66.2	64.8	68.0	

/A International Monetary Fund price index, comprising 39 price series for 34 nonfuel primary commodities. See Appendix I of International Monetary Fund, Primary Commodities Market Developments and Outlook 1986, for a description of this index.

/B Unit value for petroleum exports of major fuel exporting countries.

/C Unit value of manufactured exports of "developed market economies," United Nations, Monthly Bulletin of Statistics (New York), various issues.

/D Commodity prices deflated by unit values of manufactures.

/E Country coverage in this table is different from other tables as here high-income oil exporters are included in developing countries.

Source: International Monetary Fund.

TABLE A.9: VOLUMES AND RELATIVE PRICES OF DEVELOPING COUNTRIES' NONFUEL PRIMARY COMMODITY EXPORTS /A

	Actual						Projected	
	1965-85		1965-73		1973-85		1986-95	
	Export Volume	Relative Prices /B						
<b>NONFUEL PRIMARY COMMODITIES</b>								
All developing countries	3.5	-1.1	3.2	-0.4	3.4	-0.7	3.6	1.8
Low-income	2.1	-1.4	2.6	-0.6	2.1	-3.2	2.8	1.6
Middle-income	4.0	-1.0	3.5	-0.4	4.2	-2.8	3.7	1.9
Memo:								
Sub-Saharan Africa	1.4	-1.1	3.5	-0.9	1.1	-2.9	2.5	1.3
Highly-indebted	3.6	-1.2	2.6	-0.0	4.3	-3.4	4.0	1.6
<b>FOOD</b>								
All developing countries	4.0	-0.8	2.9	0.3	3.9	-0.3	4.1	1.5
Low-income	2.5	-0.8	1.7	-0.2	2.4	-2.8	3.7	1.2
Middle-income	4.5	3.7	3.5	0.4	5.0	-3.0	1.8	4.2
Memo:								
Sub-Saharan Africa	1.2	0.5	1.5	0.5	1.7	-2.2	3.0	0.4
Highly-indebted	3.6	-0.6	2.7	0.8	4.3	-3.1	3.9	1.4
<b>NONFOOD AGRICULTURE</b>								
All developing countries	1.7	-0.6	2.7	-0.4	1.8	-0.3	0.1	2.5
Low-income	0.8	-0.9	1.6	0.4	1.7	-2.5	0.0	2.8
Middle-income	1.8	-0.5	2.9	-0.6	1.0	-1.5	0.0	2.3
Memo:								
Sub-Saharan Africa	0.2	-0.1	2.3	1.0	0.0	-1.8	0.9	3.4
Highly-indebted	0.1	-0.3	-1.1	0.7	1.4	-1.5	-0.5	1.7
<b>METALS AND MINERALS</b>								
All developing countries	4.7	-3.0	5.0	-2.8	4.6	-2.7	4.7	2.0
Low-income	2.3	-3.5	5.9	-2.9	1.8	-4.7	2.8	1.7
Middle-income	5.7	-2.8	4.8	-2.7	6.1	-4.3	5.0	2.0
Memo:								
Sub-Saharan Africa	1.7	-3.6	6.1	-3.1	1.0	-4.8	2.6	1.8
Highly-indebted	5.9	-3.6	5.6	-3.2	5.8	-5.0	5.3	1.8

/A For country classification see Table A.22.

/B International prices deflated by unit values of manufactured exports (MUV).

Source: Economic Analysis and Projections Department, World Bank.

TABLE A.10: CAUSES OF SHORTFALLS IN EXPORT EARNINGS FROM INDIVIDUAL COMMODITIES AND FROM MANUFACTURES, 1976-86 /A

	Cereals	Soybeans and Products	Meat	Seafood	Sugar	Cocoa	Coffee
(Percentages)							
Share of commodity in total of component shortfalls	3.2	2.8	3.5	1.9	8.1	2.3	7.3
Causes:							
Unit value changes	<u>13.8</u>	<u>38.8</u>	<u>61.4</u>	<u>40.8</u>	<u>63.7</u>	<u>83.0</u>	<u>74.4</u>
Volume changes	<u>86.2</u>	<u>61.2</u>	<u>38.6</u>	<u>59.2</u>	<u>36.3</u>	<u>17.0</u>	<u>25.6</u>
Weak external demand	9.2	-	10.2	1.4	4.8	-	0.3
Weather	68.9	61.2	4.0	25.6	14.5	10.8	4.5
Other fortuitous factors /B	-	-	5.9	28.9	1.4	0.3	0.9
Unusual performance in pre- or post-shortfall years	0.7	-	0.5	1.8	1.0	2.4	1.2
Political causes	-	-	15.3	-	11.3	0.8	9.7
Miscellaneous domestic causes /C	7.4	-	2.7	1.5	3.3	2.7	9.0
	Cotton	Rubber	Forestry Products	Copper	Bauxite and Aluminum	Iron Ore	Manu- factures
(Percentages)							
Share of commodity in total of component shortfalls	3.8	3.4	5.5	8.7	1.7	1.4	15.3
Causes:							
Unit value changes	<u>29.8</u>	<u>57.9</u>	<u>52.7</u>	<u>75.3</u>	<u>20.1</u>	<u>30.7</u>	<u>25.5</u>
Volume changes	<u>70.2</u>	<u>42.1</u>	<u>47.3</u>	<u>24.7</u>	<u>79.9</u>	<u>69.3</u>	<u>74.5</u>
Weak external demand	22.7	16.4	37.8	7.0	56.7	58.1	41.3
Weather	21.7	9.2	-	1.7	-	-	-
Other fortuitous factors /B	-	-	5.0	0.4	2.6	0.4	4.4
Unusual performance in pre- and post-shortfall years	0.4	6.3	1.8	2.9	9.8	-	21.2
Political causes	4.2	-	1.7	4.9	1.9	7.9	0.6
Miscellaneous domestic causes /C	21.2	10.2	1.0	7.8	8.9	2.9	7.0

/A Shortfalls associated with drawings under the Fund's CFF, 1976-86.

/B Plant disease, exhaustion of natural resources, production cycles, external transportation difficulties, industrial accidents, etc.

/C Increased domestic demand, inadequate producer prices, shortage of inputs, internal transport difficulties, overvalued currency, etc.

Source: International Monetary Fund.



TABLE A.12: ENERGY CONSUMPTION BY ECONOMIC REGIONS AND MAJOR FUEL, 1961-84 (ACTUAL) AND 1990-2000 (PROJECTED)

Countries/Economies	1961		1970		1984		1990		2000	
	MTOE	%								
INDUSTRIAL	1,930.5	100.0	3,121.2	100.0	3,620.3	100.0	4,007.3	100.0	4,630.9	100.0
Liquid Fuels	817.5	42.3	1,576.4	50.5	1,583.6	43.7	1,700.6	42.4	1,851.0	40.0
Natural Gas	322.1	16.7	621.1	19.6	726.4	20.1	763.6	19.1	865.2	18.7
Solid Fuels	646.1	33.5	705.9	22.6	776.1	21.4	864.9	21.6	1,013.6	21.9
Primary Electricity	144.8	7.5	226.8	7.3	534.1	14.8	678.2	16.9	901.1	19.4
EAST EUROPEAN	652.0	100.0	1,052.4	100.0	1,720.8	100.0	1,968.3	100.0	2,437.8	100.0
Liquid Fuels	150.5	23.1	324.9	30.9	544.3	31.6	554.9	28.2	576.2	23.6
Natural Gas	68.2	10.5	188.8	17.9	503.1	29.2	661.6	33.6	952.8	39.1
Solid Fuels	416.7	63.9	503.0	47.8	572.4	33.3	615.9	31.3	684.0	28.1
Primary Electricity	16.5	2.5	35.6	3.4	101.1	5.9	135.9	6.9	224.8	9.2
DEVELOPING	412.6	100.0	789.5	100.0	1,709.4	100.0	2,174.1	100.0	3,208.3	100.0
Liquid Fuels	191.5	46.4	383.5	48.6	752.4	44.0	897.8	41.3	1,201.3	37.5
Natural Gas	19.2	4.7	50.9	6.4	148.0	8.7	212.3	9.8	413.9	12.9
Solid Fuels	179.1	43.4	301.6	38.2	639.3	37.4	815.5	37.5	1,139.4	35.5
Primary Electricity	22.7	5.5	53.5	6.8	169.7	9.9	248.5	11.4	453.7	14.1

Sources: United Nations Energy Statistics (actual); Economic Analysis and Projections Department, World Bank (projected).

TABLE A.13: ECONOMIC ASSUMPTIONS UNDERLYING THE PRIMARY COMMODITY FORECASTS, 1965-2000

(% CHANGE PER ANNUM)

	Historical			Projections		
	1965-73	1973-80	1980-86	1986-90	1990-95	1995-2000
GNP/GDP						
Industrial countries	4.7	2.8	2.4	3.1	3.3	3.3
Developing countries	6.7	5.0	3.3	4.6	4.9	4.5
High-income oil exporters	9.1	7.7	-2.2	4.6	5.4	4.5
East European economies	4.5	3.3	2.4	2.2	2.2	2.2
USSR	4.7	3.4	2.5	2.2	2.3	2.3
Other	3.3	2.6	1.9	2.1	2.1	2.1
5 Major industrial countries' GNP deflator in terms of:						
Local currencies	6.5	8.8	4.7	2.9	4.4	4.0
US dollars	5.0	10.3	3.2	5.7	2.1	2.0
MUV Index in dollar terms /A	5.7	11.8	2.5	2.2	2.3	2.3
US real interest rate /B	2.6	1.4	5.9	3.5	3.0	3.0
Population growth						
Industrial countries	1.0	0.7	0.5	0.5	0.4	0.4
Developing countries	2.5	2.1	2.0	2.0	1.8	1.8
East European economies	N.A.	0.8	0.8	0.7	0.6	0.6

/A Weighted by exports of manufactures from 5 major industrial countries to developing countries. The weights, based on data for 1981-83, are: France 0.111; Federal Republic of Germany 0.167; Japan 0.336; United Kingdom 0.097; United States 0.289.

/B US short-term interest rate, as an index, deflated by index of change in US GDP deflator.

Sources: OECD, Economic Outlook; IMF, International Financial Statistics; UN, Monthly Bulletin of Statistics; Economic Analysis and Projections Department, World Bank (Projections).

Table A14: Developing Countries : Terms of trade, 1965-1995 a/

		Percentage Change per Annum b/					Indices, 1980=100 b/					
		1965-73	1973-80	1980-84	1984-86	1986-95	1965	1973	1980	1984	1986	1995
All Developing Countries	c/	0.6	1.6	-0.6	-2.6	0.3	77.1	82.4	100.0	97.9	92.9	96.1
Oil Exporters		-0.0	9.9	-1.5	-24.4	2.5	33.1	33.5	100.0	97.4	55.7	73.4
Sub-Saharan Africa		-10.9	12.6	-1.7	-29.5	2.3	52.7	25.6	100.0	96.8	48.1	63.7
Latin America and Caribbean		3.5	8.5	-1.7	-22.2	2.9	28.8	37.4	100.0	97.3	58.8	79.4
Europe, Middle East & N. Africa		-4.3	9.6	-1.8	-27.9	2.6	48.3	32.9	100.0	96.7	50.3	68.3
East Asia		-1.3	11.1	-1.1	-21.0	1.4	35.3	33.1	100.0	98.3	61.4	72.7
Non-Oil Primary Exporters		-1.0	-2.6	-2.1	-1.3	0.3	130.8	128.1	100.0	90.8	88.5	90.2
Sub-Saharan Africa		-1.3	-2.2	-1.0	-1.3	0.5	134.8	135.4	100.0	93.4	91.0	92.4
Low Income		-1.2	-2.7	-1.3	-1.7	0.5	133.8	142.4	100.0	92.1	89.1	90.5
Middle Income		-1.7	-0.9	-0.3	-1.4	0.4	137.7	119.9	100.0	95.8	93.1	94.7
Latin America and Caribbean		-0.3	-3.2	-1.8	-2.4	0.5	131.7	139.1	100.0	91.3	86.9	89.5
Europe, Middle East & N. Africa		-0.9	-1.5	-1.8	1.7	-0.1	122.2	106.3	100.0	92.2	95.4	94.7
East Asia		-1.7	-2.0	-2.2	-5.1	0.7	128.0	123.0	100.0	90.2	81.3	86.5
South Asia		1.5	-2.6	-0.4	4.4	-0.3	121.5	142.1	100.0	97.8	106.5	104.2
Manufactures Exporters		1.8	-2.7	0.9	5.4	-0.6	117.0	130.5	100.0	102.8	114.1	107.5
Memo Items:												
Highly Indebted Countries		1.4	3.5	-0.5	-7.9	0.8	57.7	66.9	100.0	98.7	83.7	90.6
Sub-Saharan Africa		-8.3	4.8	-1.5	-15.4	1.2	100.7	59.5	100.0	95.3	68.2	77.5

Source: Economic Analysis and Projections Department, World Bank.

a/ The terms of trade are here defined as the ratio of the price of total exports to the price of total imports. These prices have been computed by EPD staff by aggregating detailed price series with country-specific trade shares by commodity (changing through time). The price series include over 30 primary commodities as well as manufactures.

b/ Figures for 1986 are staff estimates; for 1995, forecasts.

c/ For country classification, see Table A22.

Table A15: Developing Countries : Merchandise Export Volume, 1965-1995

		Percentage Change per Annum a/					Indices, 1980=100 a/					
		1965-73	1973-80	1980-84	1984-86	1986-95	1965	1973	1980	1984	1986	1995
All Developing Countries	b/	4.9	4.7	4.2	2.4	5.3	53.4	79.8	100.0	119.8	125.6	199.0
Oil Exporters		4.1	-0.9	-0.6	0.1	3.4	92.1	129.8	100.0	96.4	96.7	130.3
Sub-Saharan Africa		24.4	-0.4	-11.1	5.7	2.9	27.7	120.2	100.0	62.5	69.8	87.6
Latin America and Caribbean		-2.8	-4.0	3.1	-2.6	4.6	184.5	161.1	100.0	113.8	108.0	159.1
Europe, Middle East & N. Africa		7.9	2.0	1.5	0.1	2.6	61.7	114.0	100.0	104.4	104.6	133.9
East Asia		14.4	2.5	1.8	0.8	2.4	36.3	99.0	100.0	104.1	105.9	132.7
Non-Oil Primary Exporters		3.6	7.0	2.6	1.6	4.8	47.0	61.9	100.0	111.4	115.1	175.0
Sub-Saharan Africa		4.9	1.0	-1.8	4.4	2.7	67.9	89.2	100.0	94.4	102.9	133.1
Low Income		4.3	0.2	-2.8	1.2	2.9	77.8	95.8	100.0	90.2	92.4	121.9
Middle Income		6.2	2.7	-0.2	9.3	2.4	50.2	77.5	100.0	101.8	121.7	153.1
Latin America and Caribbean		2.0	6.5	0.3	1.9	4.8	58.8	66.7	100.0	103.5	107.5	162.9
Europe, Middle East & N. Africa		5.4	3.5	9.4	1.9	6.0	49.2	86.0	100.0	147.4	153.1	259.6
East Asia		4.6	8.2	7.9	1.8	5.6	41.9	60.5	100.0	136.9	141.8	231.2
South Asia		-2.2	5.9	4.9	6.4	6.4	80.3	68.8	100.0	118.9	134.6	232.7
Manufactures Exporters		8.4	9.8	8.7	4.1	6.4	27.9	55.0	100.0	145.5	157.7	274.1
Memo Items:												
Highly Indebted Countries		3.1	1.1	0.3	0.5	4.9	80.3	104.5	100.0	104.2	105.2	160.9
Sub-Saharan Africa		15.0	0.1	-7.3	5.1	2.8	42.4	108.9	100.0	74.1	81.9	104.2

Source: Economic Analysis and Projections Department, World Bank.

a/ Figures for 1986 are staff estimates; for 1995, forecasts.

b/ For country classification, see Table A22.

Table A16: Developing Countries : Purchasing Power Of Exports, 1965-1995 a/

	Percentage Change per Annum b/					Indices, 1980=100 b/					
	1965-73	1973-80	1980-84	1984-86	1986-95	1965	1973	1980	1984	1986	1995
All Developing Countries c/	5.6	6.4	3.6	-0.2	5.6	41.2	65.8	100.0	117.3	116.7	191.1
Oil Exporters	4.0	8.9	-2.2	-24.3	6.0	30.5	43.4	100.0	93.9	53.9	95.6
Sub-Saharan Africa	10.8	12.2	-12.6	-25.5	5.3	14.6	30.7	100.0	60.5	33.6	55.8
Latin America and Caribbean	0.6	4.3	1.4	-24.2	7.5	53.1	60.3	100.0	110.7	63.5	126.3
Europe, Middle East & N. Africa	3.2	11.8	-0.3	-27.8	5.2	29.8	37.5	100.0	101.0	52.7	91.5
East Asia	12.9	13.8	0.7	-20.3	3.9	12.8	32.7	100.0	102.4	65.0	96.5
Non-Oil Primary Exporters	2.5	4.3	0.5	0.3	5.1	61.5	79.3	100.0	101.2	101.8	157.8
Sub-Saharan Africa	3.5	-1.1	-2.8	3.1	3.2	91.5	120.8	100.0	88.2	93.6	123.0
Low Income	3.1	-2.5	-4.1	-0.5	3.4	104.1	136.4	100.0	83.1	82.3	110.3
Middle Income	4.4	1.7	-0.5	7.7	2.9	69.2	92.9	100.0	97.6	113.3	145.0
Latin America and Caribbean	1.6	3.1	-1.5	-0.6	5.3	77.4	92.7	100.0	94.5	93.4	145.8
Europe, Middle East & N. Africa	4.4	1.9	7.4	3.7	5.9	60.1	91.4	100.0	135.9	146.0	245.8
East Asia	2.9	6.1	5.5	-3.4	6.3	53.6	74.5	100.0	123.5	115.2	200.0
South Asia	-0.7	3.1	4.5	11.1	6.2	97.6	97.8	100.0	116.2	143.4	242.6
Manufactures Exporters	10.4	6.9	9.7	9.7	5.8	32.6	71.7	100.0	149.5	179.9	294.8
Memo Items:											
Highly Indebted Countries	4.5	4.7	-0.2	-7.4	5.8	46.3	70.0	100.0	102.8	88.1	145.7
Sub-Saharan Africa	5.4	4.8	-8.6	-11.1	4.1	42.7	64.7	100.0	70.6	55.8	80.8

Source: Economic Analysis and Projections Department, World Bank.

a/ The purchasing power of exports is defined as the dollar value of total exports deflated by the dollar price of imports (the latter being calculated as described in Table A14).

b/ Figures for 1986 are staff estimates; for 1995, forecasts.

c/ For country classification, see Table A22.

Table A17: Developing Countries : GDP in Volume, 1965-1995 a/

		Percentage Change per Annum b/					Indices, 1980=100 b/					
		1965-73	1973-80	1980-84	1984-86	1986-95	1965	1973	1980	1984	1986	1995
All Developing Countries	c/	6.6	5.4	2.9	4.3	4.8	42.3	69.3	100.0	113.3	123.1	187.7
Oil Exporters		7.3	6.0	0.7	0.3	3.9	39.3	66.1	100.0	104.6	105.2	147.4
Sub-Saharan Africa		8.8	3.9	-3.2	0.0	3.4	43.3	73.4	100.0	87.4	87.5	117.9
Latin America and Caribbean		7.0	5.8	-0.1	-0.5	4.4	39.5	67.2	100.0	102.4	101.4	148.3
Europe, Middle East & N. Africa		5.8	8.3	4.8	2.1	3.9	38.6	57.2	100.0	121.0	126.2	175.5
East Asia		8.1	7.2	3.6	0.8	2.9	33.8	61.6	100.0	117.8	119.7	154.3
Non-Oil Primary Exporters		5.2	4.2	1.6	2.6	4.0	50.3	74.9	100.0	107.6	113.4	160.7
Sub-Saharan Africa		4.5	2.6	0.8	3.2	3.6	59.7	82.7	100.0	103.9	110.8	152.3
Low Income		3.6	2.2	1.0	3.0	3.7	65.9	86.1	100.0	104.4	110.7	153.9
Middle Income		7.9	4.3	0.3	4.1	3.2	41.2	72.5	100.0	102.6	111.2	147.5
Latin America and Caribbean		4.6	3.4	-0.9	1.8	3.5	55.6	78.9	100.0	97.9	101.5	138.6
Europe, Middle East & N. Africa		6.8	5.0	3.2	4.2	4.4	42.9	72.4	100.0	113.3	123.0	180.4
East Asia		6.5	6.8	3.9	1.1	4.9	37.9	64.0	100.0	116.5	119.2	182.7
South Asia		3.3	5.4	5.1	6.2	5.2	53.8	68.6	100.0	122.6	138.2	217.4
Manufactures Exporters		7.4	6.0	4.9	7.0	5.6	38.6	67.3	100.0	121.7	139.4	227.5
Memo Items:												
Highly Indebted Countries		7.1	5.4	-0.6	2.8	4.4	40.8	68.6	100.0	99.0	104.6	153.6
Sub-Saharan Africa		6.5	3.4	-1.3	1.6	3.5	50.6	77.5	100.0	94.8	97.8	133.2

Source: Economic Analysis and Projections Department, World Bank.

a/ GDP in volume for groups of countries is obtained by summing the national GDP levels measured in 1980 dollars (obtained by deflating GDP in dollars at current prices and exchange rates by the GDP deflator expressed as a dollar index).

b/ Figures for 1986 are staff estimates; for 1995, forecasts.

c/ For country classification, see Table A22.

Table A18: Developing Countries : Merchandise Import Volumes, 1965-1995

	Percentage Change per Annum a/					Indices, 1980=100 a/					
	1965-73	1973-80	1980-84	1984-86	1986-95	1965	1973	1980	1984	1986	1995
All Developing Countries b/	5.7	6.1	0.2	2.0	5.7	42.8	64.8	100.0	104.1	108.4	173.9
Oil Exporters	4.5	10.3	-3.9	-12.0	3.8	36.5	47.4	100.0	89.7	69.4	98.4
Sub-Saharan Africa	5.3	18.6	-8.9	-20.6	4.7	23.7	28.6	100.0	73.5	46.4	69.4
Latin America and Caribbean	4.4	6.3	-14.1	-3.6	5.6	48.3	63.7	100.0	65.0	60.4	102.8
Europe, Middle East & N. Africa	2.0	13.4	5.4	-14.6	1.0	34.0	37.2	100.0	119.2	86.9	94.9
East Asia	11.2	8.8	10.5	-13.8	3.6	25.0	47.3	100.0	141.3	105.0	142.9
Non-Oil Primary Exporters	2.7	4.3	-1.7	-2.0	4.4	58.9	71.3	100.0	96.2	92.3	132.1
Sub-Saharan Africa	3.4	2.4	-6.3	1.6	2.6	73.1	86.7	100.0	77.6	80.1	99.5
Low Income	3.0	1.5	-5.9	1.0	2.4	81.2	91.6	100.0	79.4	81.0	97.9
Middle Income	5.0	5.0	-7.1	3.0	3.2	54.5	75.3	100.0	73.6	78.2	103.0
Latin America and Caribbean	2.1	3.8	-8.3	-2.7	4.2	61.8	71.9	100.0	76.3	72.3	99.5
Europe, Middle East & N. Africa	5.3	4.9	2.6	2.4	3.5	50.8	76.4	100.0	111.1	116.4	154.4
East Asia	2.2	6.0	4.2	-5.2	5.6	51.3	66.5	100.0	116.2	104.5	169.5
South Asia	-3.4	8.4	3.7	6.4	4.6	68.1	58.5	100.0	117.6	133.0	194.3
Manufactures Exporters	9.9	5.9	3.6	9.6	6.8	32.0	67.9	100.0	118.1	141.8	247.7
Memo Items:											
Highly Indebted Countries	6.7	5.5	-10.0	-0.8	6.2	39.5	65.6	100.0	71.1	69.9	119.2
Sub-Saharan Africa	3.8	7.6	-7.6	-7.6	3.4	50.5	60.1	100.0	75.7	64.7	85.7

Source: Economic Analysis and Projections Department, World Bank.

a/ Figures for 1986 are staff estimates; for 1995, forecasts.

b/ For country classification, see Table A22.

Table A19: Developing Countries : Per Capita Income (GNV) a/

		Percentage Change per Annum b/					Indices, 1980=100 b/					
		1965-73	1973-80	1980-84	1984-86	1986-95	1965	1973	1980	1984	1986	1995
All Developing Countries	c/	4.3	3.4	0.5	1.6	3.1	56.9	78.7	100.0	103.2	106.6	139.7
Oil Exporters		6.0	5.0	-2.7	-5.8	1.9	43.0	65.1	100.0	92.3	81.9	96.4
Sub-Saharan Africa		6.2	2.3	-5.6	-10.7	0.6	53.3	74.8	100.0	82.1	65.5	70.2
Latin America and Caribbean		5.8	4.5	-5.3	-5.1	2.7	44.2	69.0	100.0	83.9	75.5	95.6
Europe, Middle East & N. Africa		4.8	7.8	1.8	-3.7	1.5	39.7	53.4	100.0	107.8	100.0	112.5
East Asia		5.5	7.3	2.4	-4.9	1.3	38.4	56.6	100.0	113.0	102.3	115.0
Non-Oil Primary Exporters		2.5	1.2	-1.7	-0.2	1.8	74.7	91.9	100.0	94.2	93.8	109.1
Sub-Saharan Africa		0.9	-0.3	-3.1	-0.6	0.9	95.6	102.4	100.0	89.0	88.1	94.2
Low Income		0.4	-0.9	-2.9	-1.3	1.0	105.0	107.7	100.0	89.6	87.4	94.1
Middle Income		3.1	1.3	-4.2	1.3	0.6	70.2	88.1	100.0	86.3	88.5	92.4
Latin America and Caribbean		2.3	0.7	-4.1	-0.6	2.0	79.1	95.3	100.0	85.8	84.7	100.5
Europe, Middle East & N. Africa		4.5	2.2	0.2	2.4	2.5	61.9	88.1	100.0	101.2	106.1	130.7
East Asia		3.0	3.6	0.7	-2.7	3.4	57.8	79.9	100.0	102.3	96.9	129.4
South Asia		0.1	2.9	2.0	4.1	2.5	82.5	82.5	100.0	108.4	117.6	146.9
Manufactures Exporters		5.0	3.9	3.3	5.7	4.1	53.9	78.7	100.0	114.2	127.7	182.5
Memo Items:												
Highly Indebted Countries		5.0	3.2	-4.2	-0.4	2.5	54.0	78.2	100.0	86.0	85.4	106.3
Sub-Saharan Africa		3.1	1.0	-4.6	-5.5	0.8	72.6	87.3	100.0	84.9	75.7	81.4

Source: Economic Analysis and Projections Department, World Bank.

a/ GNV is defined as constant-dollar GNP plus the purchasing power of exports (see footnote a/, Table A16) less constant-dollar exports.

b/ Figures for 1986 are staff estimates; for 1995, forecasts.

c/ For country classification, see Table A22.

Table A20: Developing Countries : Commodity Composition of Total Exports in 1985  
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 (Shares by value, in percent)

		Total Non-Fuel Primary	Food	Non-Food Agriculture	Metals & Minerals	Fuels	Manufactures
All Developing Countries	a/	24.7	14.8	4.8	5.1	25.1	50.2
Oil Exporters		10.4	5.4	2.8	2.2	79.0	10.6
Sub-Saharan Africa		11.2	6.9	2.8	1.6	86.6	2.2
Latin America and Caribbean		9.8	6.3	1.0	2.6	74.7	15.5
Europe, Middle East & N. Africa		7.1	2.4	3.4	1.3	87.2	5.7
East Asia		14.3	5.2	5.9	3.2	72.6	13.2
Non-Oil Primary Exporters		51.0	29.9	9.0	12.1	9.0	39.9
Sub-Saharan Africa		79.0	43.9	12.4	22.7	7.4	13.6
Low Income		83.1	44.2	11.2	27.7	8.3	8.6
Middle Income		73.6	43.5	14.1	16.0	6.1	20.2
Latin America and Caribbean		71.6	48.5	5.7	17.5	8.1	20.4
Europe, Middle East & N. Africa		37.6	23.0	5.7	8.9	9.4	53.0
East Asia		48.4	23.3	16.0	9.2	13.6	38.0
South Asia		35.6	23.4	11.4	0.8	3.3	61.1
Manufactures Exporters		16.9	10.8	3.4	2.7	8.5	74.6
Memo Items:							
Highly Indebted Countries		33.8	22.4	3.5	7.9	37.1	29.1
Sub-Saharan Africa		41.3	23.3	7.1	10.9	51.4	7.3

Source: Economic Analysis and Projections Department, World Bank.

a/ For country classification, see Table A22.

Table A21: Developing Countries : Commodity Composition of Total Imports in 1985  
(Shares by value, in percent)

	Total Non-Fuel Primary	Food	Non-Food Agriculture	Metals & Minerals	Fuels	Manufactures
All Developing Countries a/	18.0	10.8	4.5	2.7	17.6	64.4
Oil Exporters	18.6	14.1	2.7	1.9	7.1	74.2
Sub-Saharan Africa	15.8	13.1	0.6	2.1	4.8	79.4
Latin America and Caribbean	15.2	10.9	2.1	2.2	4.3	80.5
Europe, Middle East & N. Africa	26.1	20.6	4.3	1.2	6.3	67.7
East Asia	14.2	9.1	2.9	2.2	17.0	68.8
Non-Oil Primary Exporters	14.8	9.8	2.8	2.3	18.5	66.6
Sub-Saharan Africa	16.5	12.4	2.6	1.5	18.6	64.9
Low Income	15.1	11.4	2.6	1.2	19.8	65.1
Middle Income	20.0	14.9	2.7	2.5	15.6	64.3
Latin America and Caribbean	15.1	10.4	2.5	2.2	16.5	68.4
Europe, Middle East & N. Africa	14.7	9.5	2.8	2.4	21.6	63.7
East Asia	13.2	7.8	2.5	2.9	23.1	63.7
South Asia	24.5	17.2	4.7	2.5	20.3	55.3
Manufactures Exporters	19.7	10.2	6.3	3.2	20.7	59.6
Memo Items:						
Highly Indebted Countries	15.9	10.0	2.7	3.1	18.0	66.1
Sub-Saharan Africa	16.2	12.7	1.7	1.8	12.6	71.2

Source: Economic Analysis and Projections Department, World Bank.

a/ For country classification, see Table A22.

TABLE A.22 : CLASSIFICATION OF DEVELOPING COUNTRIES BY GEOGRAPHIC REGIONS AND ANALYTICAL GROUPS 1/

	SUB-SAHARAN AFRICA		EAST ASIA	SOUTH ASIA	EUROPE, MIDDLE EAST, NORTH AFRICA	LATIN AMERICA & CARIBBEAN
Low Income	Burundi	Benin		Bangladesh		Haiti
	Ethiopia	Burkina Faso		Burma		
	Kenya	C. African Rep.		Nepal		
	Madagascar	Gambia		Pakistan		
	Malawi	Ghana		Sri Lanka		
	Rwanda	Mali				
	Somalia	Niger				
	Sudan	Senegal				
	Tanzania	Sierra Leone				
	Uganda	Togo				
	Zaire					
	Zambia					
	Non-oil Primary Exporters	Botswana	Cote d'Ivoire	Fiji		Cyprus
Lesotho		Liberia	Papua NG		Greece	Barbados
Mauritius		Mauritania	Malaysia		Jordan	Bolivia
Seychelles			Philippines		Malta	Chile
Zimbabwe			Thailand		Morocco	Colombia
					Tunisia	Costa Rica
					Turkey	Dom. Republic
					Yemen AR	El Salvador
					Yemen PDR	Guatemala
						Guyana
						Honduras
						Jamaica
						Nicaragua
					Panama	
					Paraguay	
					Peru	
					Uruguay	
Manufactures Exporters			China	India		
			Hong Kong		Israel	Brazil
			Korea		Portugal	
				Yugoslavia		
Oil Exporters		Cameroon	Indonesia		Algeria	Ecuador
		Congo			Egypt	Mexico
		Gabon			Syria	Trinidad & T.
		Nigeria				Venezuela

1/ The developing countries listed in this table are only those that are included in EPD's 90-country group.

Note: On other country groups: Highly indebted countries include Argentina, Brazil, Chile, Colombia, Cote d'Ivoire, Mexico, Morocco, Nigeria, Peru, Philippines, Venezuela, Yugoslavia, Uruguay, Ecuador, Bolivia, Costa Rica, and Jamaica. High-income oil exporters (not included in developing countries) comprise Bahrain, Brunei, Kuwait, Libya, Qatar, Saudi Arabia, and United Arab Emirates. Industrial countries are the members of the OECD, apart from Greece, Portugal, and Turkey, which are middle-income developing countries.