

MICHIGAN AGRICULTURE

AND ITS LINKAGES TO DEVELOPING NATIONS

PART II

A GUIDE FOR
EXTENSION AGENTS
AND OTHER
DISCUSSION LEADERS

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APR 67



THE INSTITUTE OF INTERNATIONAL AGRICULTURE
AND THE COOPERATIVE EXTENSION SERVICE
AT MICHIGAN STATE UNIVERSITY



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INTRODUCTION

Over the past 20 years, the nations of the world have become increasingly interdependent. International trade has expanded and international capital flows, and the borrowing and lending of money between countries now exert important influences on the world economy. Today, the prosperity of most countries is affected by the prosperity of their trading partners and by the strength of the world economy as a whole. Agriculture is no exception to this pattern. Farmers in a number of countries have come to depend on international markets to sell their products, and these markets cannot function efficiently unless the international economic system is sound.

Nations are increasingly interdependent.

A 1984 publication of the Institute of International Agriculture at Michigan State University, Michigan Agriculture and Its Linkages to Developing Nations, discussed some of the ways in which this growing global interdependence ties the well-being of farmers in Michigan and the United States to events in the developing countries of Africa, Asia and Latin America. That publication covered a wide range of topics, including foreign development assistance, food aid, international technology transfers, and international development and agricultural trade.

Since that 1984 publication was written, international development and agricultural trade have received increased scrutiny. During the early 1980s, American farm exports declined. American farmers began to ask questions about agricultural trade, such as whether increased agricultural production in developing countries has contributed to the drop in American agricultural exports. As the United States finds it increasingly difficult to market its surplus agricultural commodities, some Americans are questioning whether their government should be engaged in programs intended to increase agricultural production overseas.

This update of that earlier report focuses on issues related to these growing concerns. It investigates trends in international agricultural development, American agricultural assistance to developing countries, and agricultural trade. It evaluates whether agricultural growth in developing countries tends to help or harm American agricultural exporters, and it considers policies that the United States might implement to foster complementarities between American and developing country agriculture.

This report begins with a discussion of some of the historical patterns leading to the current situation and then examines the economic factors that have been most important in shaping those patterns. With that background, it goes on to pose a number of questions about what the future might hold:

- Can the United States hope to regain its former levels of agricultural exports?
- What countries are most likely to be growth markets for American agricultural commodities?
- How might agricultural development in poor countries be beneficial to U.S. farmers, and how might it be harmful?

The conclusions of the report may be surprising. Despite the popular idea that competition from producers in developing countries has hurt American farmers, the analysis shows that increased food production in developing countries has not been an important factor in the recent decline in U.S. agricultural exports. On the contrary, developing countries offer great potential as growth markets for American agricultural products, and increased food production in developing countries may lead them to increase their food imports. In such instances, American agricultural assistance to developing countries will not stimulate detrimental foreign competition, but rather will promote the interests of farmers both in the United States and overseas. This conclusion is a reflection of the interdependent nature of the world economy. Economic growth in developing countries can contribute to worldwide prosperity; economic stagnation in developing countries can be a factor in global recession.

Economic growth in developing countries can contribute to prosperity world-wide; economic stagnation in developing countries can be a factor in global recession.

I. U.S. AGRICULTURAL EXPORTS IN HISTORICAL PERSPECTIVE

- When did export markets become important to American farmers?
- How have trends in agricultural exports fluctuated over the years?
- What led up to the decline in agricultural exports during the 1980s?

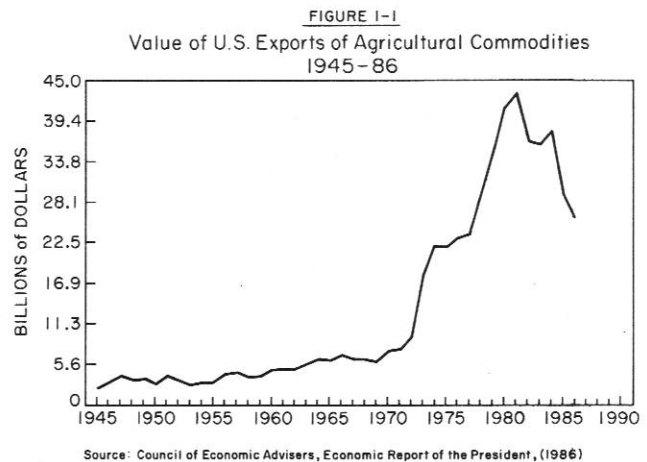
The current levels of American agricultural exports can be understood only in the context of historical patterns. Since the end of the second world war, three major periods have occurred in the evolution of American farm exports¹. Each of these periods is characterized by a different set of influences on agricultural trade and by corresponding differences in export performance.

Three Periods in American Agricultural Exports

The first of these periods ran from the end of World War II through the early 1970s. It was characterized by slow but steady expansion of U.S. agricultural exports. From 1945 to 1971, the value of U.S. agricultural exports grew at an average rate of \$400 million (1985 dollars) per year². Beginning in 1972, a period of unprecedented growth in exports started that lasted until 1981. Over these years, the value of farm exports grew at an average rate of \$2.1 billion (1985 dollars) per year, more than four times faster than growth during the postwar period³. Farmers who expanded production to meet this foreign demand received a shock in 1982, however, when a marked decline in U.S. agricultural exports began. The value of farm exports dropped \$4.7 billion in 1982 alone⁴, and continued to decline through 1986. The changes in the value of American agricultural exports that occurred from 1945 through 1986 are presented in Figure 1-1.

Slow, Steady Growth During The Post-World War II Period

From the end of World War II until the early 1970s, world markets for agricultural goods expanded slowly but steadily. As Europe



American agricultural exports boomed in the 1970s.

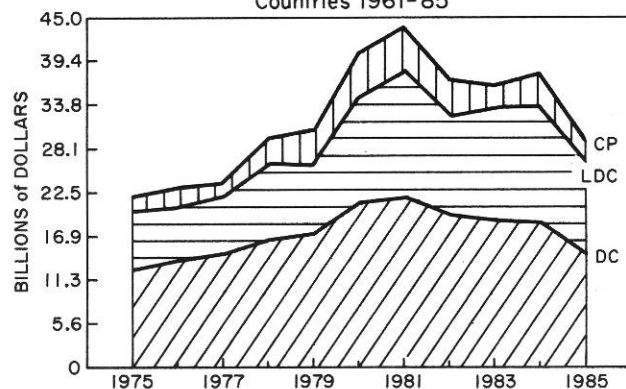
recovered from the devastation of the war, the incomes of Europeans rose. This economic revitalization, coupled with moderate population growth, generated a demand for food in excess of European production. Japan also experienced economic growth and increased income in the postwar period and, as in Europe, demand for food grew faster than food production. As this demand for food grew overseas, new technologies and greater mechanization were increasing the productivity of U.S. agriculture, and American farmers captured these expanding foreign markets. Throughout this period, the United States enjoyed steady, if unspectacular, growth in its exports of agricultural commodities.

The Export Boom of the 1970s

The 1970s marked a dramatic break from the slow, steady growth of the postwar era. In 1973, the value of U.S. agricultural exports nearly doubled. An important factor in this sudden jump in exports was a decision by the Soviet government to increase its food imports to satisfy consumer demand. At about the same time, new markets opened in other centrally planned countries and also in less developed countries. The U.S. began trading with mainland China, and oil exporting nations riding high on windfall oil profits increased their food imports. The expansion of U.S. agricultural exports to less developed and centrally planned countries during the 1970s is shown in Figure 1-2.

FIGURE 1-2

Shares of U.S. Agricultural Exports to Developed (DC), Less Developed (LDC) and Centrally Planned (CP) Countries 1961-85



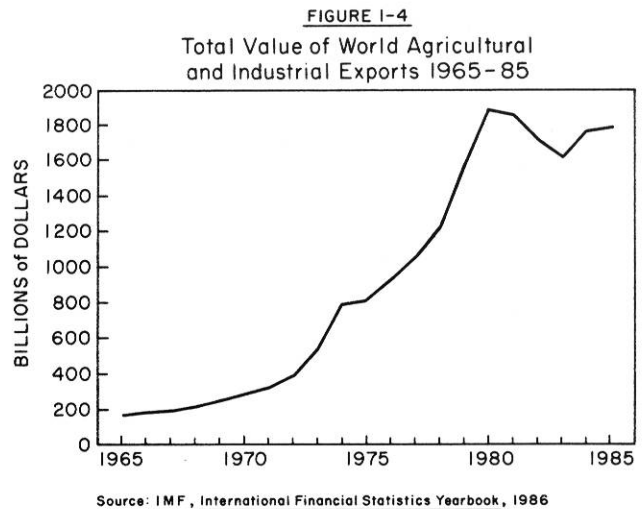
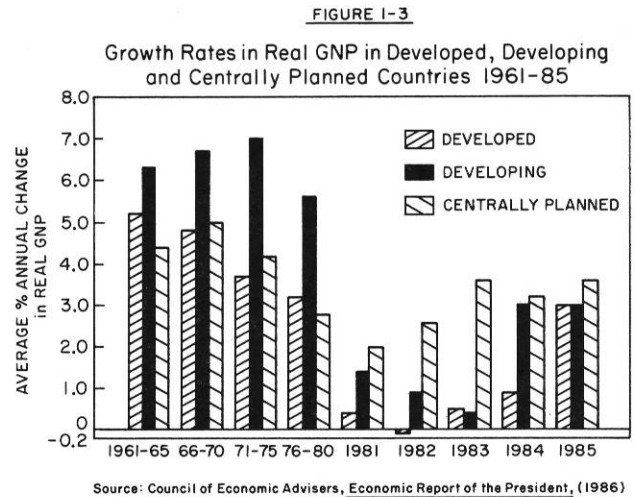
Source: USDA, Foreign Agricultural Trade of the U.S., (1985 and various years) Washington, D.C.: Economic Research Service

Certain macroeconomic factors further stimulated the world economy and boosted agricultural trade. In the early 1970s, a number of developed countries, including the United States, implemented economic policies intended to stimulate economic growth. In particular, many countries maintained loose monetary policies. This meant that they released relatively large amounts of new currency in an attempt to keep their economies buoyant. These monetary policies made borrowing money a favorable proposition, and many less developed and centrally planned countries began borrowing heavily both from commercial banks and from public international financial institutions. As this new liquidity stimulated growth in these countries, they were able to increase imports of all commodities, including food. Exporting nations thus benefited from expanding overseas markets. Figures 1-3 and 1-4 illustrate global economic growth and expansion of trade in the 1970s.

The United States was successful at capturing new agricultural markets as the world economy expanded. The high level of productivity of U.S. agriculture and accumulated surplus stocks made it possible to respond quickly to foreign demand for farm goods. Also, because the value of the U.S. dollar was low relative to the currencies of other major trading nations, the prices of American products were competitive in international markets.

Farmers prospered during this period, but with this new prosperity came a new dependence on world markets. By 1980, 40 percent of the farmland in America was producing crops for export, and 29 percent of the income of American farmers was generated by foreign trade⁵. American farmers had become partners in the world economic system, supplying other nations with vital food supplies, and dependent on strong world markets for their own well-being.

By 1980, 40 percent of American farmland produced for export.



The Export Bust of the 1980s

In the early 1980s, the world agricultural trade scene changed drastically. A number of global economic factors contributed to a general slow-down in world economic activity, and American agricultural exports suffered badly. During the 1970s, inflation, fueled largely by loose monetary policies, became a chronic problem. In an effort to counteract this problem, the United States tightened up its money supply. Making less new currency available depressed economic growth. The easy credit that had kept less developed and centrally planned countries liquid in the 1970s dried up. Many of the countries that had been important in the expansion of world trade in the 1970s were crippled in the 1980s. Though less developed and centrally planned countries have maintained their relative importance as markets for American agricultural products, their absolute ability to import food has dropped off since 1981. A general slowdown in economic growth and trade occurred in the early 1980s.

American exports were vulnerable to this global recession. The value of the dollar rose sharply during this period, making American products more expensive on the world market. As U.S. agricultural commodities became less competitive, other producers -- notably those in Argentina, Australia, Canada, and the European Community -- were encouraged to increase their production for foreign markets. The European Community, for instance, used export subsidies to expand foreign sales. The U.S. experienced an absolute decline in levels of agricultural exports, and began losing shares of world markets for some important commodities (Figure 1-5a & b). U.S. agriculture did not maintain its position in an increasingly competitive international marketplace. The resulting drop in exports was a major factor contributing to the economic ills of farmers in America.

FIGURE 1-5a

World Market Shares of Major Exporters of Wheat

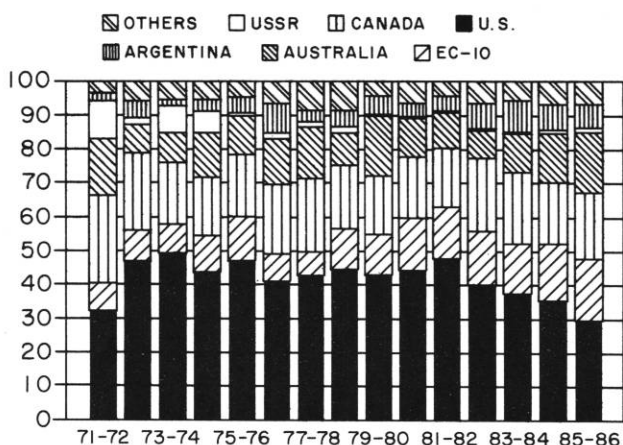
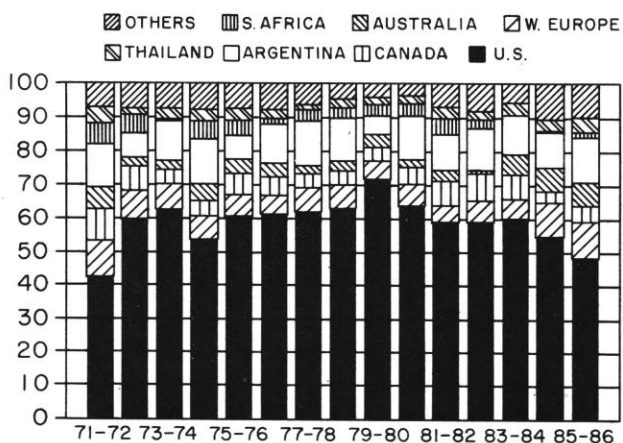


FIGURE 1-5b

World Market Shares of Major Exporters of Coarse Grains



Source: World Food Institute, 1986

Farm exports suffered during the global recession of the early 1980s.

Agriculture's Contribution to the National Trade Balance

Declining agricultural exports also had an important effect on the national balance of trade. The 1970s marked the beginning of increasing U.S. trade deficits. Strong agricultural exports in the 1970s helped to reduce the trade deficit. However, declining exports and increasing imports of agricultural products in the 1980s reduced the positive contribution of agriculture to the overall trade balance (Figures 1-6 and 1-7).

Strong agricultural exports can help reduce the U.S. trade deficit.

FIGURE 1-6

Value of U.S. Agricultural Imports and Exports 1968-85

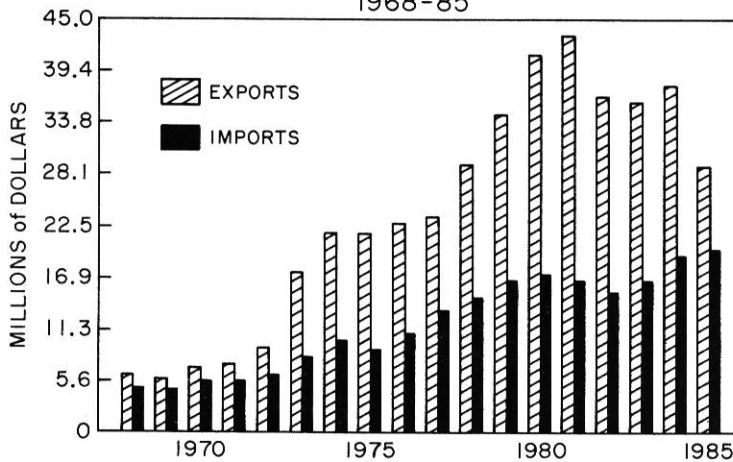
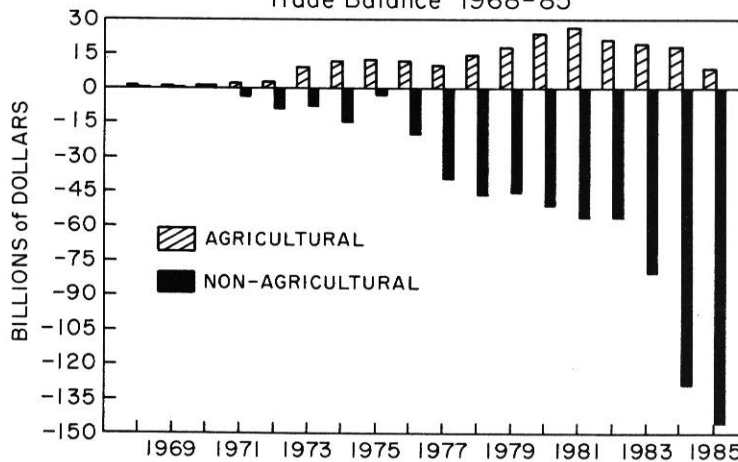


FIGURE 1-7

U.S. Agricultural and Non-agricultural Trade Balance 1968-85



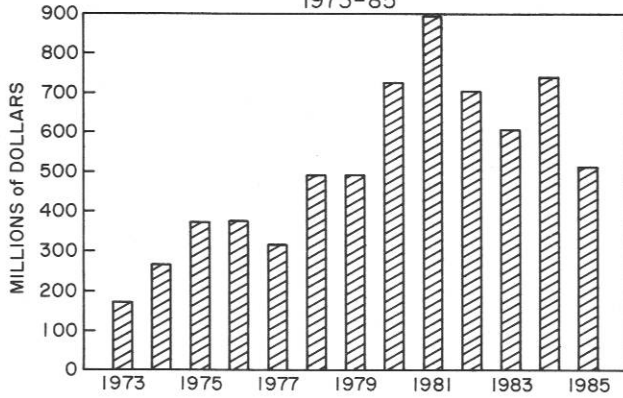
Source: USDA, Foreign Ag Trade of the U.S. Calendar Year 1985 Supplement

Michigan's Place in National Trends

It is difficult to determine the extent to which trends in exports of agricultural goods produced in any particular state are reflected in national trends. The best estimates available are calculations by the U.S. Department of Agriculture, which are based on the assumption that each state's contribution to exports of a given commodity are proportional to its contribution to total national production. If Michigan produces 25 percent of the nation's dry bean crop, for example, it is considered to have produced 25 percent of the dry bean exports. Based on such calculations, analysis of recent export performance of Michigan agricultural products naturally shows a pattern similar to national trends. Total exports grew strongly during the 1970s but dropped off after 1981. Michigan's three major groups of export crops -- feed grains, soybeans, and beans and vegetables -- all show this same pattern (illustrated in Figures 1-8 and 1-9). The national decline in export earnings affected Michigan farmers as well.

FIGURE 1-8

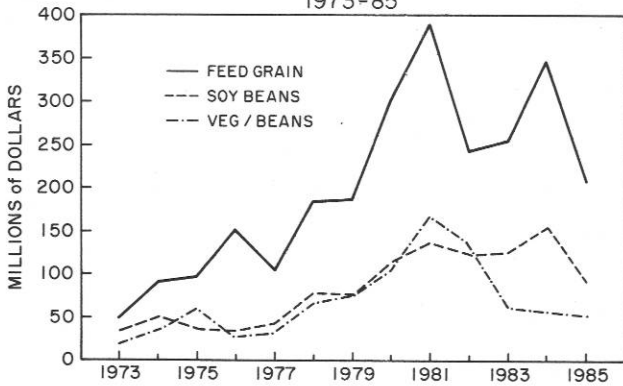
Value of Michigan Agricultural Exports
1973-85



Source: Michigan Dept. of Agriculture, Michigan Ag Statistics, 1986

FIGURE 1-9

Exports of Major Michigan Commodities
1973-85

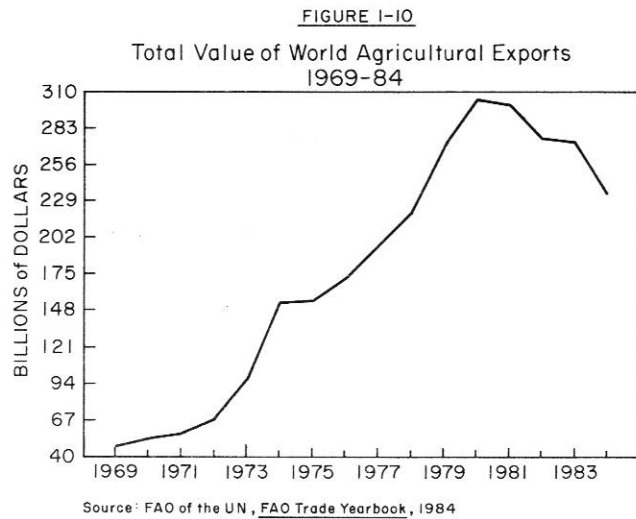


Source: Michigan Dept. of Agriculture, Michigan Ag Statistics, 1986

Putting Things in Context: Historically and Globally

In trying to understand the current state of American farm exports, one must consider both the historical and global contexts. In the context of history, the boom of the 1970s is as much of an anomaly as the bust of the 1980s. The spectacular performance of the 1970s should not be the measure of current success or failure. Rather than taking the 1970s as "normal" years, we must remember that they deviated from a steady trend stretching back to the second world war. In fact, some of the factors that stimulated expansion in the 1970s -- inflationary monetary policy, and a high level of lending to LDCs and centrally planned countries, for example -- led to the contraction that was experienced later. To put the United States back on a path of steady growth in agricultural exports, we need to seek policies aimed toward stimulating gradual improvements in global economic factors rather than to hope for a return to the unprecedented highs of the 1970s.

In the global economic environment, the recent decline in exports is not a problem unique to American farmers. It coincides with a general slowdown in world trade and economic expansion. Similarly, the strong performance of the 1970s took place in a rapidly growing world market place. The trends illustrated in Figure 1-10 demonstrate that worldwide agricultural exports experienced a boom in the 1970s and a bust in the 1980s. (The peak in export values in the late 1970s was due in part to high prices. Measured in volume, the changes in trade levels would not be as great.) Though it is useful to try to identify specific factors influencing the level of agricultural exports, it does not make sense to look for a demon that is being especially cruel to American farmers. The difficulties being experienced by American farmers are felt in other nations as well. Solutions to current problems will lie not in narrow approaches favoring any particular interest group, but rather in policies and actions that stimulate economic recovery worldwide and make the international marketplace a more profitable arena in which to operate.



Steady expansion in exports is a reasonable expectation—reliving the boom years is not.

FOOTNOTES

¹G. E. Rossmiller, "Farm Exports: An Historical Perspective," *Choices*, (Third Quarter 1986), pp. 24-25.

²*Ibid.*

³*Ibid.*

⁴*Ibid.*

⁵William A. Galston, *A Tough Row to Hoe: The 1985 Farm Bill and Beyond*, (1985), Roosevelt Center for American Policy Studies, Lanham, Maryland: Hamilton Press, 1985, p. 38.

II. EFFECTS OF THE LARGER ECONOMY ON FOOD AND AGRICULTURE MARKETS

- How have American economic policies affected the world economy?
- How do international financial factors affect global demand for American agricultural commodities?

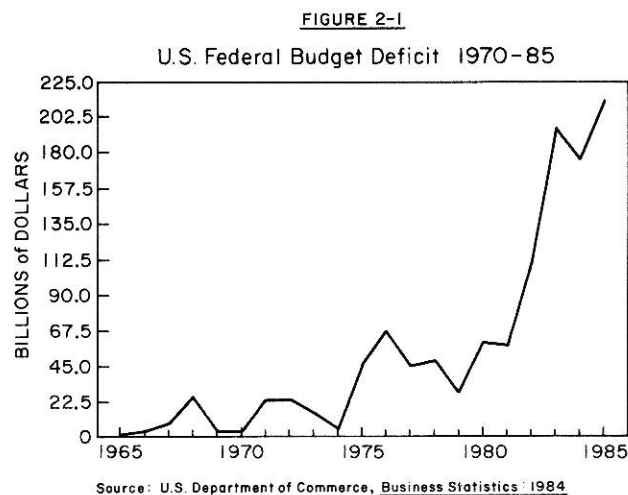
Because American agriculture has come to depend on international markets, it is affected by the international financial factors that influence world trade. Of fundamental importance to the position of the United States in the world marketplace are U.S. monetary policy and the federal budget deficit.

Recent Changes in Monetary and Fiscal Policy

Two areas of U.S. economic policy -- fiscal and monetary policy -- have important effects on agriculture. The government's decisions on its budget and spending are known as its fiscal policy. Monetary policy consists of the government's decisions about managing the nation's money supply and interest rates. Changes in monetary and fiscal policy over the past 20 years have been important factors in the fluctuations in agricultural trade.

During the 1970s, the U.S. government maintained a monetary policy that emphasized controlling interest rates. This policy led to a rapid rise in inflation. By 1979, however, high levels of inflation were recognized as a serious problem, and the government adopted a monetary policy aimed at controlling growth in the money supply. This helped to ease inflation but pushed interest rates up. At about the same time, the federal budget deficit started to grow. The borrowing that the government undertook to finance this deficit also exerted an upward pressure on the interest rate (Figure 2-1). Changes in interest rates over this period of time are presented in Figure 2-2.

Today, American agriculture is tied to macroeconomic policies and international finance.



Effects of Interest Rates and Inflation on Agricultural Trade

The dynamics underlying interest and inflation rates affect agricultural trade through two channels: borrowing by less developed and centrally planned countries, and international investments and their influence on exchange rates.

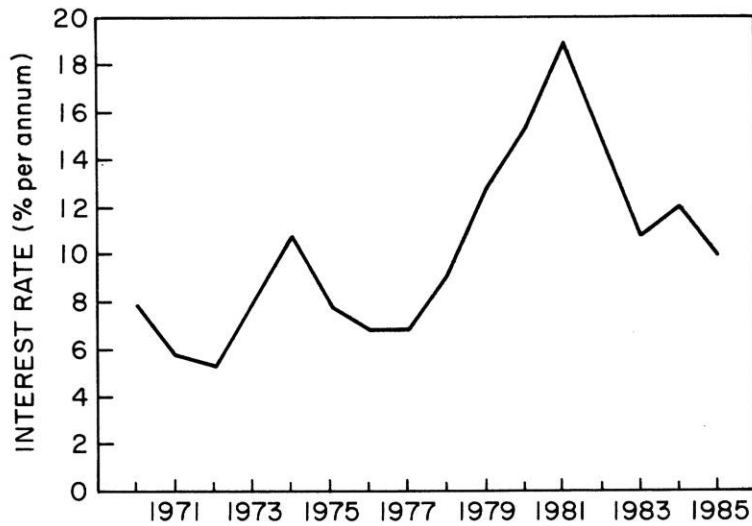
High inflation and low interest rates encourage borrowing. Borrowing in the 1970s stimulated the economies of LDCs and expanded their ability to import.

The low or negative real interest rates¹ in the 1970s made it very appealing for less developed countries to borrow money, both from commercial banks and from institutions such as the International Monetary Fund. From 1970 to 1980, developing countries rapidly increased their foreign debt. In the short term, this borrowing stimulated the economies of many poor countries and enabled them to increase their imports, including imports of agricultural products. For a short time, it appeared that everyone was winning in this situation. Developed countries, interested in stimulating export markets, encouraged international lending to developing countries; private banks were making commercial loans that they expected to profit from; and the borrowing nations enjoyed new liquidity on what appeared to be easy terms.

At the start of the 1980s, however, the tightening of money supplies by the United States and other industrial countries shocked this system. Inflation in developed nations slowed and real interest rates shot up. Hindsight suggests that both borrowers and lenders had overextended themselves. As real interest rates rose, interest payments became increasingly burdensome, and developing countries found it more and more difficult to meet their repayment schedules. In 1981, Mexico announced that it would be unable to meet payments on its loans, and the problem of developing country debt was thrown into the limelight of international finance. Since then, many proposals for alleviating this problem have been discussed -- ranging from calls for outright cancellation of some debts, to suggestions that financial institutions already involved simply extend further loans to roll the debt over. The repayments of many developing countries' loans have been rescheduled. The accumulation of this debt since 1970 is shown in Figure 2-3.

FIGURE 2-2

U.S. Prime Interest Rates 1970-85

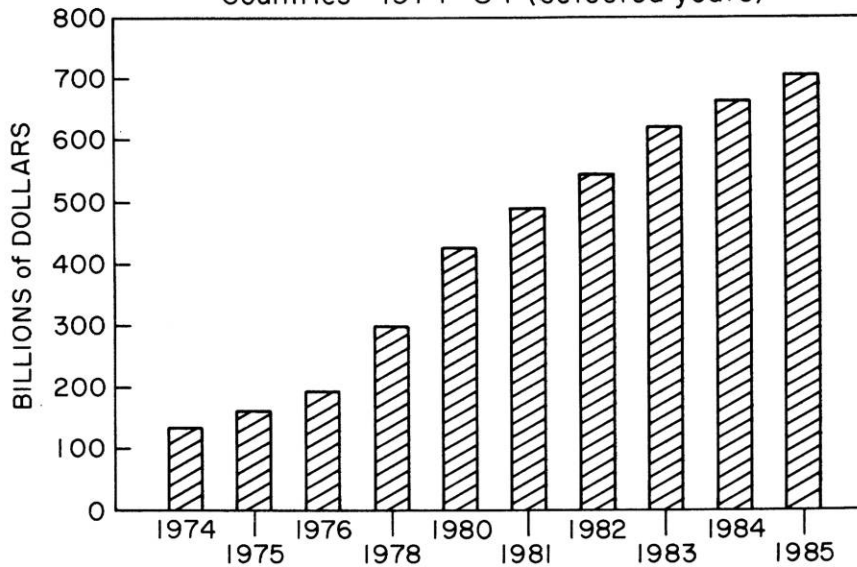


Source: Council of Economic Advisers, Econ. Report to Pres., 1986

High interest rates of the 1980s depressed the world economy. LDCs have been forced to reduce their imports.

FIGURE 2-3

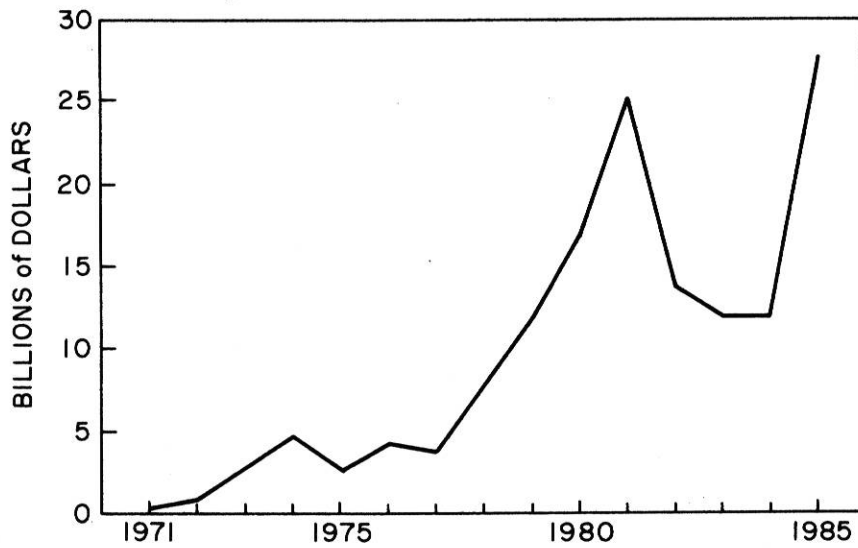
Total Long-Term External Debt for All Developing Countries 1974-84 (selected years)



Source: World Bank, World Debt Trades, 1985-86

FIGURE 2-4

Foreign Direct Investment in the U.S. 1971-85¹

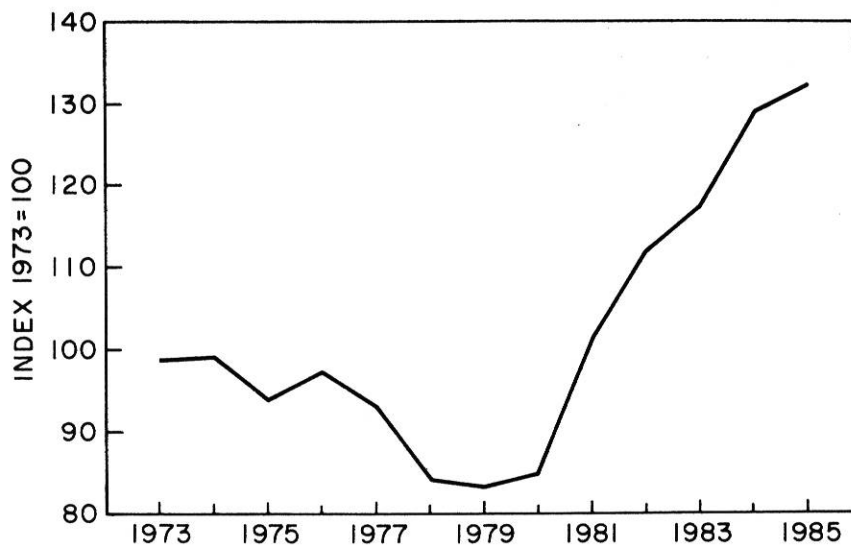


Source: U.S. Dept. of Commerce, Business Statistics: 1984

1- SEE FOOTNOTE AT END OF CHAPTER II

FIGURE 2-5

Indexed Value of the U.S. Dollar 1973-85



Source: Council of Economic Advisers, Econ. Report of President, 1986

How does this international banking problem affect American farmers? During the 1970s, when borrowed money helped developing countries to grow economically and expand their imports, these countries were an important growth market for U.S. agricultural exports. In the 1980s, however, developing countries as a whole have been forced to devote an increasing proportion of their foreign exchange to loan repayments. This leaves little foreign exchange to finance the purchase of foreign goods. These debt and foreign exchange problems force developing countries to adopt economic and trade policies aimed at limiting their imports and promoting their exports. As they are forced to contract their imports, an important export market for American farmers dries up.

As U.S. interest rates increase the burden of debtor nations, they also drive up the value of the dollar. When interest rates in the U.S. are high, investors in other countries are attracted to American investments. When the demand for U.S. dollars is high, the value of the dollar rises relative to foreign currencies. This was the case through the first half of the 1980s. High interest rates attracted more foreign investment to the United States and the value of the dollar simultaneously shot up. Many other factors influence the value of the dollar, but the amount of foreign capital invested in the U.S. is generally accepted as an important factor. The fluctuations in the level of foreign investment and in the value of the dollar over the last fifteen years are shown in Figures 2-4 and 2-5².

The value of the dollar is important to American exporters because it influences the competitiveness of their products on world markets. When the value of the dollar is high compared to the values of foreign currencies, the cost of American products is high compared to the cost of foreign products. This situation stimulates production by competitors, and undermines U.S. exports. The low value of the dollar in the late 1970s helped stimulate foreign sales of U.S. agricultural commodities, and the sharp increase in the value of the dollar in the early 1980s was a contributing factor in the decline in U.S. agricultural exports.

High interest rates drive up the value of the dollar, making U.S. goods less competitive abroad.

Summary

A graphic summary of the effects of monetary and fiscal policy and other macroeconomic variables on U.S. agricultural export performance is presented in Figure 2-6. This chart illustrates that a tight monetary policy coupled with a fiscal deficit push up interest rates and slow inflation, and that these variables, in turn, exacerbate the problems of developing country debt and overvalue the dollar. It shows that the ultimate effect of tight monetary policy and budget deficits is to depress demand for U.S. exports. These factors had an influence on the decline in American agricultural exports during the early 1980s.

While it is difficult to ascribe a particular proportion of export losses to any specific factor, it is clear that macroeconomic variables are fundamentally important. In looking for ways to expand agricultural exports, it is important to consider the state of the global economy.

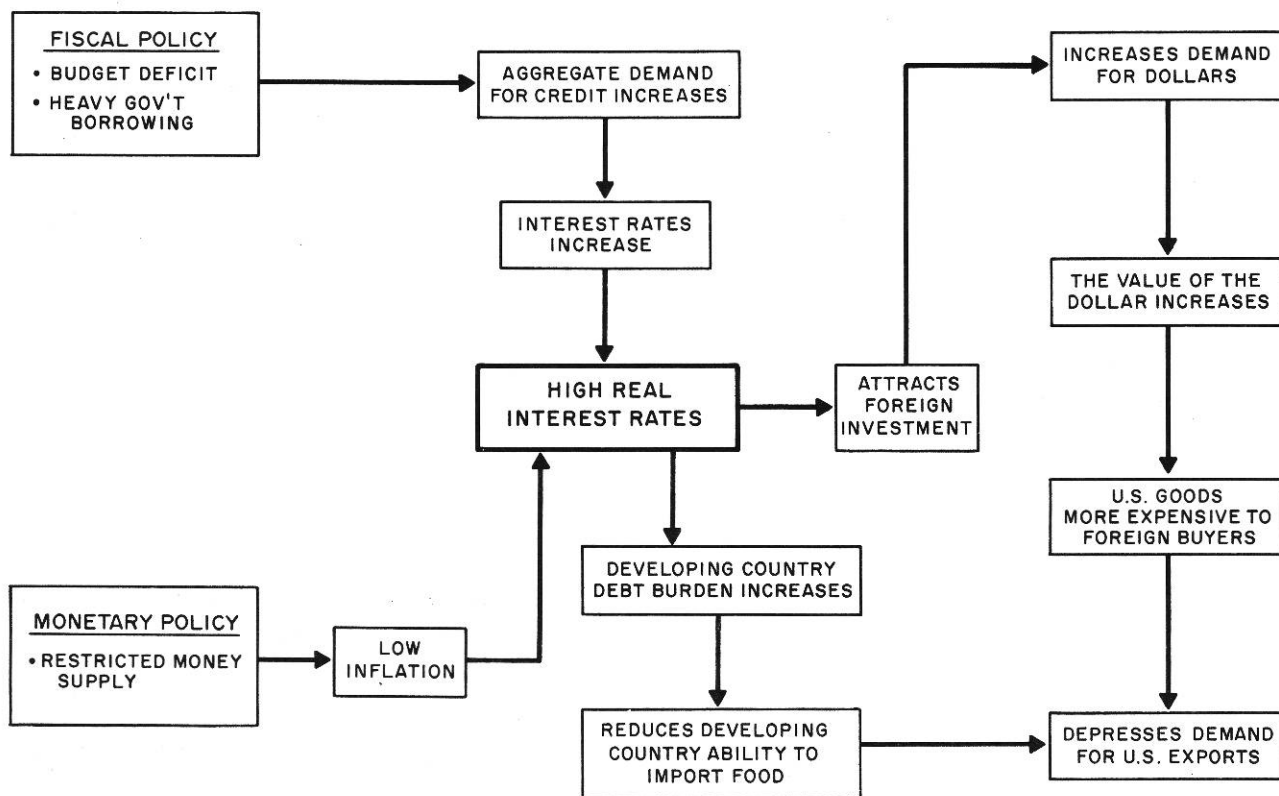
FOOTNOTES

¹Real interest rates are nominal (bank) rates of interest minus the rate of inflation.

²Data includes purchases and sales of equity interests in U.S. companies, increases and decreases in intercompany debt, and reinvested earnings in incorporated and unincorporated U.S. affiliates.

FIGURE 2-6

How U.S. Fiscal and Monetary Policies Affect Exports



III. POTENTIAL GROWTH MARKETS FOR U.S. AGRICULTURAL PRODUCTS

-
- Which regions of the world show the greatest potential as markets for American commodities?
 - Where is demand for food imports likely to expand, and where is demand likely to contract?
-

American farmers have come to depend on international trade to market their expanding production. The future prosperity of U.S. agriculture will, therefore, depend to a large extent on the development of overseas markets. A first step in understanding how the U.S. might boost its agricultural exports is to identify the most promising customers for its products. An examination of three classes of importers -- industrial nations, developing countries, and centrally planned economies -- shows where potential for export market growth lies.

Industrial Nations: Increasing Production and Stagnant Demand

Although developed nations have been important trading partners historically and will continue to purchase an important share of American farm products, there is little potential for expansion of exports to these markets. The percentage of U.S. exports going to developed markets has already decreased steadily from 63 percent in 1965-67 to 51 percent in 1982-84⁶. For a number of reasons this trend is expected to continue. The populations of developed nations are growing slowly, at only about .6 percent per year⁷. Also, incomes are generally high enough for people to consume a diet that satisfies their needs and tastes. With stable population levels and virtually no unmet food needs, growth in demand for food is slow.

Food production in these countries, on the other hand, is growing steadily. From 1976 to 1983, per capita food production in developed country markets increased at a rate of 1 percent per year⁸. With food production increasing more rapidly than demand, these countries will need to

Developed countries have little growth potential as export markets for agricultural products.

import less (and will, in fact, want to export more). A United States Department of Agriculture study estimates that during the remainder of the 1980s, cereal production in developed nations will grow 5-10 percent faster than food demand⁹. Stagnant demand and increased supply in these developed markets make it clear that American farmers must look elsewhere to find foreign markets with growth potential.

Developing Countries: Growing Food Needs and Stagnant Production

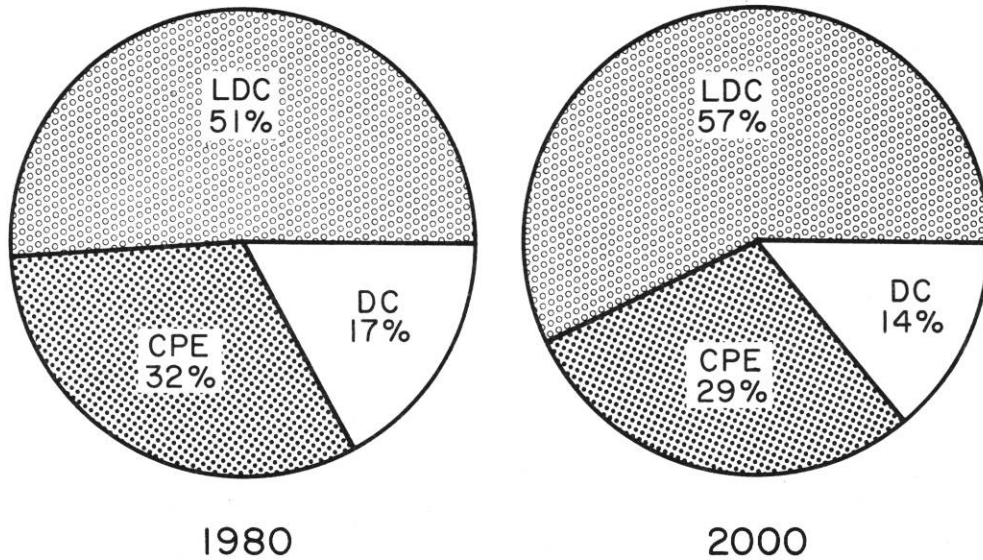
Several characteristics of developing countries, on the other hand, indicate that under the right set of circumstances these countries may be important growth markets for U.S. agricultural exports. From 1965-67 to 1982-84, the percentage of U.S. exports sold to developing countries grew modestly from 35 percent to 40 percent¹⁰, but potential for further expansion of food sales to these nations remains. In contrast to industrial countries, the populations of developing nations are growing rapidly, at a rate of about 2.27 percent per year. In 1980, 51 percent of the world's population lived in developing countries; by the year 2000, that figure will have increased to about 57 percent, for a total increase of 1.3 billion people (Figure 3-1). In addition, it is a sad fact that many people in developing countries do not have enough to eat. And many who are able to obtain sufficient quantities of food still subsist on nutritionally inadequate diets, either because they lack variety or because they are deficient in protein. Because their populations are growing and because they have large unmet food needs, the food demand of developing countries is increasing.

Although food needs in developing countries are growing, their food production has barely kept up with population growth. From 1976 to 1985, per capita food production in developing countries grew by only .3 percent per year¹¹. This poor performance is due to a broad and complex set of factors, including failures to improve agricultural technology, inappropriate government policies, and low domestic and international prices for agricultural produce. In the future, these countries will want to increase their agricultural production to meet part of their food deficits, but they will also want to fill

LDCs are potential growth markets for American agricultural exports.

FIGURE 3-1

Percentages of World Population Living in Developed (DC),
Less Developed (LDC) and Centrally Planned (CP)
Countries, 1980 and 2000



Source: U.S. Agriculture and Third World
Development: Critical Linkage, 1987

Future population growth will
come from developing countries.

part of this gap with imports. If rising food demand leads developing countries to increase their food imports, this important market for American exports will expand.

Centrally Planned Economies: A Growing Market, But Relatively Small and Unstable

In recent years, centrally planned countries have also provided a growing market for U.S. farm products. From 1965-67 to 1982-84, the percentage of U.S. agricultural exports going to these nations grew from only 2 percent to 10 percent¹². Their future potential as markets, however, is probably not as great as that of the developing countries. The populations of centrally planned countries are growing at a rate of about 1.2 percent per year¹³. From 1976 to 1985, per capita agricultural production in centrally planned economies at an annual rate of 1.2 percent per year¹⁴. Also, imports by centrally planned economies depend largely on unpredictable government policy decisions, and they might, therefore, not be considered stable markets. For example, the decision of the Soviet Union in 1973 suddenly to increase imports benefited U.S. farmers. In 1987 on the other hand, U.S. agricultural exports to the Soviet Union are expected to plunge from their 1986 level of about \$1.1 billion to only \$.1 billion. Improved farm technology and policy changes, as well as favorable weather, led to a bumper crop in 1986 that allowed the Soviet Union to reduce its imports drastically¹⁵. The Soviet demand for imported grain appears to be leveling off; its imports over the next five years will probably be well below those of the last five years¹⁶. Finally, although the share of U.S. exports to centrally planned countries has grown, the total value remains small compared to developed nations and less developed countries. In 1985, about \$2.5 billion of U.S. exports went to centrally planned economies, compared to \$14.5 and \$12.0 billion to developed markets and developing countries respectively¹⁷.

U.S. farm exports to centrally planned countries are uncertain and probably have limited growth potential.

Summary

Developing countries appear to be an important potential growth market for American agricultural exports. Developed countries have been and will certainly continue to be important trading partners, but because their food production is growing faster than their demand for food, it is unlikely that they will expand food imports in the foreseeable future. Food imports by centrally planned economies have grown but are still of far smaller magnitude than imports by developing or industrial countries. The following chapters discuss how developing countries might overcome some of the constraints that limit their ability to import food.

FOOTNOTES

⁶T. Kelley White, et. al., "Global Trends in Agricultural Production and Trade," (1987), in Randall B. Purcell and Elizabeth Morrison eds., U.S. Agriculture and Third World Development: The Critical Linkage, Washington, D.C.: The Curry Foundation, 1987, p. 16.

⁷Ibid, p. 35.

⁸Ibid, p. 12.

⁹Ibid, p. 36.

¹⁰Ibid, p. 16.

¹¹Ibid, p. 11.

¹²Ibid, p. 16.

¹³Ibid, p. 35.

¹⁴Ibid, p. 11.

¹⁵United States Department of Agriculture, Outlook for U.S. Agricultural Exports, (February 19, 1987), pp. 6-8.

¹⁶Wendy L. Wall, "World's Grain Output Surges as Nations Seek Food Self-Sufficiency," The Wall Street Journal, (April 6, 1987), p. 12.

¹⁷United States Department of Agriculture, Foreign Agricultural Trade of the United States Calendar Year 1985 Supplement (1985), Washington, D. C.: Economic Research Service, p. 23.

IV. CONSTRAINTS ON THE GROWTH OF AGRICULTURAL EXPORTS TO LDCs

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- Why does the U.S. have food surpluses while developing countries have food deficits?
 - Why can't the U.S. sell more of its surpluses?
-

The comparison of markets in developed countries, developing countries and centrally planned economies in Chapter 3 suggests that developing countries show the best growth potential as customers for U.S. agricultural products. In fact, given their fast population growth and food deficits, one might wonder why American farmers are not already selling more food to people in developing countries. How can the U.S. be suffering economically from food surpluses while developing countries suffer nutritionally from food deficits?

Income and Foreign Exchange Constraints

The root of this problem of hunger amidst plenty is simply that developing countries do not have enough money to import all of the food they need. Hungry people in developing countries are too poor to buy the food American farmers would like to sell. Weak growth in income has prevented poor countries from importing as much food as they need. They also suffer from foreign exchange shortages.

By exporting goods, developing countries earn hard currency with which they can import other products. In recent years, however, exports from developing countries have been declining. From the mid-1970s to 1983, exports from low income countries fell by .8 percent per year, and exports from lower-middle income countries fell by .4 percent per year¹⁸. In addition, the prices of many raw materials that make up an important part of their exports have been falling. The combination of these two factors has depressed the foreign exchange earnings of developing countries. Increasing levels of debt have also contributed to this

LDCs are poor and do not earn enough foreign exchange to import as much food as they would like.

Economic growth in LDCs would create potential markets for American farmers.

problem. When developing countries are obliged to use part of their limited reserves of foreign currency to make debt repayments, their ability to import is further reduced. Low income and foreign exchange shortages have prevented developing country food imports from growing as rapidly as they would have without these constraints.

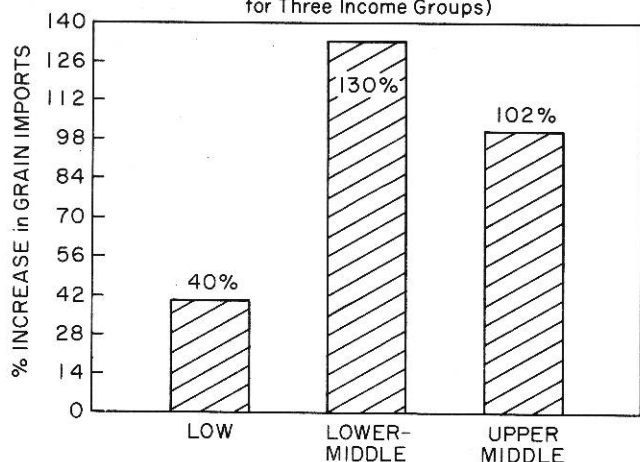
Potential vs. Effective Demand

This problem can be better understood if a distinction is drawn between potential and effective demand. A country's potential demand for food is the quantity that would be required to meet the nutritional needs, as well as to satisfy the tastes and preferences, of its population. Its effective demand is the proportion of that potential demand that a country can, in fact, afford to purchase. When people are too poor to purchase all of the food they need and desire, effective demand falls short of potential demand. In developing countries, widespread poverty diminishes effective demand for food and limits their food imports.

If poor countries were a little better off, they would be able to import more food. A recent study of agricultural imports by developing countries supports this proposition. The study divided developing countries into several groups according to their income levels, and compared their recent trends in grain imports. From 1972-73 to 1982-83, the poorest countries -- those with per capita incomes below \$400 -- increased their grain imports by 40 percent. The two categories of middle income developing countries -- defined by per capita incomes of \$400 to \$1,650, and \$1,650 and above -- each increased their grain imports by more than 100 percent over the same period (Figure 4-1). These imports benefited not only the consumers who purchased the food, but also the exporters who sold it. Therefore, it behooves both the importers and the exporters to find a way to assist the poorest developing countries in improving their economic status. If they were to become somewhat wealthier, they would, like middle income developing countries, be able to import greater quantities of food.

FIGURE 4-1

Increases in Total Grain Imports by Developing Countries (Percentage Change 1972-73 to 1982-83 for Three Income Groups)



Source: U.S. Agriculture and Third World Development: Critical Linkage, 1987

Summary

Increased income and foreign exchange earnings could enable developing nations to expand their imports. It is, therefore, in the interest of the United States and other exporting nations to assist them in overcoming the obstacles that keep them poor. By helping poor nations grow economically, the U.S. can also stimulate foreign markets for its agricultural produce. Foreign economic development assistance, which is often justified on humanitarian and political grounds, is also a tool for promoting American economic interests, and particularly the interests of exporters of agricultural commodities.

FOOTNOTES

- ¹⁸Earl D. Kellogg, "Agricultural Development in Developing Countries and Changes in U.S. Agricultural Exports," (1987), Presented at the BIFAD Regional Seminar, Michigan State University, East Lansing, Michigan, January 30, 1987, p.7.

V. THE ROLE OF U.S. DEVELOPMENT ASSISTANCE IN AGRICULTURE

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- How can U.S. foreign assistance promote wide-spread economic development?
 - What forms of foreign aid stimulate agricultural growth in developing countries?
 - Can improvements in agriculture contribute to growth in other sectors?
-

There is a broad consensus today among donor nations and the governments of developing countries alike, that agriculture can play a vital role in fostering wide-spread economic growth. During the 1960s and early 1970s, many efforts to promote economic development focused on large-scale, capital intensive industrial projects. In a number of countries, such as South Korea and Singapore, such efforts were largely successful. In most of the countries that remain poor today, however, these projects failed to generate equitable or sustainable economic development. Where industrial development has not been successful, increasing attention has been given to agriculture. Because about 63 percent of developing countries' labor force is employed in agriculture¹⁹, this sector is of the nation's fundamental importance to their economic well-being. Improvements in agriculture could stimulate significant increases in national income, and spread economic benefits among the large rural population.

Donor Assistance to Agriculture in Developing Countries

Many forms of donor assistance can be effective in stimulating the agricultural sectors of developing countries. Technological innovations, improvements in rural infrastructure, and advice on government policy are types of aid that are currently emphasized. Biological research on crops in Asia produced important increases in agricultural productivity in the 1960s. Extensive research is underway today to develop further technological innovations to boost productivity of food crops throughout the world. The improvement of rural infrastructure, and roads in particular, can

Agricultural development plays a vital role in stimulating economic growth in LDCs.

facilitate agricultural development. If farm inputs such as fertilizers and seeds can be transported more easily to farms in remote areas, and if farmers in turn can more easily transport their produce to markets, the possibilities and incentives for increased production can be vastly improved.

Government policies also have an important influence on agricultural development. Some governments of developing countries, for instance, have implemented policies to keep food prices low. Such policies are favored by consumers in urban areas who must purchase their food, but they often have a negative effect on the agricultural sector. If farmers cannot expect to earn an attractive price for their crops, they have little incentive to grow a surplus for sale. Donor nations can assist the governments of developing nations in formulating policies and programs that are more favorable to agriculture. Every country will have its own specific potentials and priorities for development, but these three forms of aid -- agricultural research, rural infrastructure development, and improved policy capability -- are some of the most important ways in which donor nations can assist developing countries in stimulating their agricultural sectors.

Three forms of development assistance

- * agricultural research,
- * rural infrastructure development, and
- * policy analysis

are important ways to stimulate agricultural sector development.

Linkages Between Agriculture and Other Sectors

If a country does succeed in increasing its agricultural productivity, the benefits can spread throughout the population. Because large proportions of the populations of developing countries are made up of farmers, improvements in the agricultural sector can contribute directly to the welfare of this large group of people.

But in addition to producing benefits for the farming population, development in agriculture can stimulate growth in other sectors as well. Imagine, for instance, a farmer in West Africa who grows rice to feed his family and sells whatever surplus he produces to earn cash to cover other food and family expenses. If he were able to improve his productivity, he would have some extra rice to sell, and his income would increase. He might then decide to buy new sandals for his children from the local sandal maker. The sandal maker would thus earn some extra money, and perhaps use it to buy a little cement to fix up his house. Through such a series

of linkages, one farmer's increased production would have spread benefits to a shoemaker, a cement dealer, and even to the cement factory. Generally speaking, as farmers become a little better off, their effective demand for consumer goods would rise, and the people who produce and sell these goods would profit from the increase in business. If many farmers were similarly able to increase their income and spending, the total impact on the economy could be substantial.

In addition, if technological innovations are developed that increase output per worker, more food can be produced with less labor. This kind of development in agriculture can release manpower from farming and create a pool of labor for other enterprises. In countries where labor is abundant, this extra labor might aggravate unemployment problems if employment generating policies are not also present. In countries where shortages of labor constrain economic growth, however, labor released from agriculture could make an important contribution to development.

By increasing rural purchasing power, and by releasing labor for non-farm enterprises, development of agriculture can thus be a first step toward a broader process of economic development. Studies have shown that increases in agricultural productivity can be associated with increases in income. Houck (1986) examined data from 1983 and 1984 on a group of over forty developing countries, and found a "highly significant" relation between agricultural productivity and per capita Gross Domestic Product (GDP is a measure of national income). He noted, "If agricultural productivity rises, then broader economic benefits clearly ensue"²⁰. This study supports the idea that increases in agricultural productivity can and usually will contribute to general economic development.

Summary

Because a large percentage of people in developing countries are engaged in agriculture, improvements in agriculture can bring benefits to a broad section of the population. If efforts toward agricultural development succeed in spreading benefits among the large rural population, other sectors of the economy can be stimulated as well. Agricultural assistance to developing countries can, therefore, act as a catalyst for broader growth throughout the economy.

Increased incomes to farmers in LDCs can stimulate growth in non-agricultural sectors as well.

FOOTNOTES

¹⁹World Bank, World Development Report 1986, (1986), New York: Oxford University Press, p. 3.

²⁰James P. Houck, "Foreign Agricultural Assistance: Ally or Adversary?" (1986), University of Minnesota Department of Agricultural and Applied Economics Staff Paper P86-50, p. 7.

VI. ECONOMIC GROWTH AND DEMAND FOR FOOD

-
- How will demand for food be affected by agricultural development in poor countries?
 - If agriculture grows in LDCs, won't increased domestic production eliminate the need for food imports?
 - How can the U.S. hope to expand markets by helping other countries grow more food?
-

If economic development in a poor country -- led by agriculture or by any other sector -- leads to increases in income across a large proportion of the population, the resulting effect on total demand for food can be substantial. There is a close relationship between income and food consumption in developing countries, primarily because the majority of people in these countries are poor and would readily consume more and better quality food if they could afford it.

Income Level and Food Consumption Patterns

Poor people have little if any income to spend on nonessential goods. Most of their income must be spent on basic necessities such as housing, clothing, and most importantly, food. Even though people in developing countries spend a large percentage of their income on food, many subsist on inadequate diets. If these people succeed in increasing their earnings, an important share of their new income will be spent on food. One author estimates that in many developing countries, a 10 percent increase in income may lead to a 5-6 percent increase in food consumption²¹. In comparison, an American who received a 10 percent pay raise, say from \$25,000 to \$27,500 per year, would probably not change his food consumption much at all. An income change would have little effect on his food consumption because, even before the pay raise, he could afford to buy the quantities and varieties of food that he desired. In developing countries on the other hand, low levels of income and nutritional deficits mean that a large proportion of any new income will be used to increase food expenditures.

People in poor countries spend a large proportion of their incomes on food.

Poor people eat more and eat better quality food when their incomes increase.

Total demand for food, however, includes not only the quantity of food that people demand but also the varieties of food that they consume. Most people in developing countries eat a diet consisting largely of a single staple grain or root crop. When incomes rise, however, people tend to diversify their diets, and in particular, they tend to consume more meat and animal products. If a demand for animal products grows large enough to stimulate grain-fed raising of livestock, the demand for food can be multiplied. The quantity of grain needed to raise livestock is many times greater than the quantity of grain that would be needed to meet an equivalent nutritional need if people consumed the grain directly. If people consume more meat and animal products as their incomes rise, an increase in demand for feed grain will contribute substantially to their total demand for food.

Economic development and increased incomes in developing countries then can lead to greater demand for food by enabling people to diversify and improve the quality of their diets.

The Relationship Between Agricultural Production and Agricultural Imports in Developing Countries

A growing body of literature subscribes to the hypothesis that increased incomes in developing countries -- even if generated by agriculture -- will generally lead to increases in agricultural imports. This proposition seems to run counter to common sense. If a country grows more food, won't it need to import less? And might it not even produce a surplus for export that could compete for markets with the products of other exporting nations?

Increased meat consumption leads to rapid increases in demand for feed grains.

In spite of these concerns, there are cases in which agricultural development in poor countries can produce results favorable to exporting nations. Increased production of one commodity may boost income and stimulate effective demand for another, preferred commodity that must be imported. Increases in millet production, for example, might increase incomes and create a market for imported wheat. In addition, even some food exports from developing countries may be beneficial to developed country exporters such as the United States. Remember that without foreign exchange earned through the export of some

product, it is impossible for a country to import. By exporting commodities that they produce efficiently, developing countries earn foreign exchange needed to import other commodities that they cannot produce efficiently but that consumers demand.

Brazil is often cited as an example of a developing country that has increased agricultural production, and whose growing exports, particularly of soybean meal and oil, have been detrimental to American farmers. It is important to note, however, that as Brazil has increased its exports of soybeans, it also has increased its imports of American agricultural products, particularly wheat and corn. Brazil has undergone growth in a variety of sectors, and improved agricultural productivity has contributed to this economic development. Exports of both industrial and agricultural products have contributed to Brazil's foreign exchange earnings. With a greater national income and larger supplies of foreign exchange, Brazil was able to increase its imports of agricultural commodities. From 1970 to 1984, the value of U.S. agricultural exports to Brazil grew at a rate of 16.3 percent per year²². As incomes rose, meat consumption went up, and today Brazil uses more grain for livestock feed than for human food²³. Most significantly, virtually 100 percent of Brazil's imports are now made on commercial terms. Before its economic growth of the 1970s, about 64 percent of Brazil's imports of American agricultural products were subsidized by the U.S. government²⁴.

Economic progress in Brazil, then, does not only show that agricultural growth in developing countries can lead to increased exports that compete with other exporting nations, but also demonstrates that growth in agriculture, and even in the export of certain commodities, can contribute to general economic development and growth in effective demand for imports of other commodities.

A report of the United States Department of Agriculture neatly sums up a similar pattern of development and trade in Taiwan:

In the early 1950s, Taiwan exported more grain than it imported. Although Taiwan has increased food production

In most poor countries, part of the wealth generated by agricultural development will be used to increase food imports.

very rapidly over the past 30 years, it now imports 60 percent of all its cereals. Virtually all of these cereals are feed grains because of greater demand for fed livestock products²⁵.

This growth in demand for food imports was possible because of rapid increases in per capita income generated by growth in agriculture.

All nations can benefit if they trade along the lines of comparative advantage.

When such trading relationships develop, a principle known to economists as comparative advantage is at work. Roughly speaking, this principle holds that nations involved in trade can all benefit if each of them produces and exports those goods that, given its resource endowments, it produces most efficiently, while importing those goods that other nations produce most efficiently. In the long-run and for national economies on the whole, comparative advantage trade can be beneficial. All nations can benefit if they trade. However, in the short-run and for specific sectors, adjusting to such a pattern of trade can cause painful dislocations. In American agriculture, for instance, feed grain producers will most likely profit from international trade. The United States produces feed grain relatively efficiently, and developing countries will purchase feed grain if they achieve some degree of economic growth. In sectors such as rice, however, which are heavily subsidized and less efficient, American farmers are not as competitive and stand to be hurt by comparative advantage free trade.

Agricultural development can lead to growth in demand that exceeds growth in output.

While such possible dislocations cannot be ignored, agricultural development in developing countries can proceed in directions that benefit U.S. agricultural exporters. A large class of goods produced by developing countries present no possible threat of competition with U.S. producers. These non-competitive commodities include a variety of crops not grown in the U.S., such as coffee and tea, cocoa, bananas, and spices. Income and foreign exchange earned through the export of such goods can enable developing countries to import other kinds of food without posing any competitive threat to American agricultural interests.

Even if agricultural growth in developing countries is based on the production of crops

similar to those grown in the U.S., the ultimate effects of such growth may be beneficial to American exporters. In some cases, agricultural development in developing countries can lead to a growth in effective demand for food even more rapid than the initial growth in agricultural production. Some of the economic and demographic characteristics of developing countries discussed earlier make such a scenario plausible.

These characteristics include fast population growth rates, the tendency of poor people to spend large proportions of their income on food, and the increase in consumption of animal products that generally accompanies an increase in income. Populations with these characteristics will tend to increase their food consumption rapidly if their incomes rise. And as discussed earlier, agriculture can be an effective starting point for wide-spread income growth, because many people are directly involved in farming and because gains in agriculture are shared with other sectors through a variety of economic linkages. These characteristics of developing countries make it reasonable to hope that the gains in income generated in agriculture can lead to a growth in demand for food so great that it outstrips the associated increase in domestic production. In such cases, increased agricultural productivity will lead to the surprising result of increased food imports.

A large body of statistical evidence corroborates this hypothesis. Researchers at the International Food Policy Research Institute conducted a study in 1979 of 16 developing countries that had shown rapid growth in food production. They found that as these countries increased their food production, they were able to satisfy a larger proportion of their staple food demand with domestic supplies, and therefore needed to import a smaller percentage of these products. At the same time, however, the total demand for food in these countries increased so much that, although they were importing smaller percentages of their staple foods, the absolute quantity that they imported increased. From about 1961 to 1976, these countries increased the value of their staple food imports by 133 percent²⁶. Development of domestic agriculture was thus associated with increased food imports.

In a similar study carried out in 1985, Earl Kellogg of the University of Illinois compared the

Growth in agriculture can lead to expanding food imports.

Success in agriculture can stimulate domestic industries.

food importing patterns of 18 developing countries that had experienced rapid growth in per capita food production with 13 developing countries that had performed poorly in agriculture. Examining data for 1970 to 1980, he found that the 18 countries showing strong growth in domestic production increased their food imports by 47 percent, while the 13 countries that had fared poorly in food production increased their imports by only 37 percent²⁷. Again, this study indicates that growth in agriculture may be related to expanding food imports.

Examining how agricultural trade patterns have, in fact, evolved in specific developing countries that have experienced recent growth in agricultural production can help illuminate the relations hypothesized above. Kenya, for instance, is among the most successful agricultural producers in Africa. Since the early 1970s, Kenya has had growth rates in agricultural production of over 3 percent per year. A broad set of government policies aimed at stimulating agricultural production and export was at least partly responsible for this success. Success in agriculture spreads benefits to industry as well. By exporting tea and coffee, its principal cash crops, Kenya generated enough income to fuel demand for a variety of consumer goods. As this effective demand developed, domestic industries producing basic consumer goods were established²⁸. Rapid population growth also contributed to increased demand for food and consumer goods. Along with this general economic development and population growth, Kenya more than doubled the value of its food imports between 1972 and 1983²⁹. Kenya is thus an example of a country in which broad economic development, stimulated by growth in agriculture, coincided with increased agricultural imports.

India, in contrast, is often cited as an example of a developing country that has experienced gains in agricultural productivity and has increased its food exports. From 1973 to 1984, total Indian agricultural production, fueled largely by green revolution technology, grew by about 40 percent³⁰. Exports over the same period almost tripled, and India is today a net exporter of agricultural products³¹. What accounts for this deviation from the pattern outlined above? In India, although great progress

has been made in agricultural productivity, the benefits of this progress have not been widely spread throughout the country. In some areas, farmers cannot afford or do not have access to the improved seeds and fertilizers that have generated gains in productivity. This segment of the population has not increased its income or purchasing power, and therefore has not contributed to national economic development or demand for food. If more farmers were to gain access to productivity-increasing technology, broader economic development and greater effective demand for food would likely follow. This increased domestic demand could reduce India's surplus for export, and even create a market for food imports³².

Agricultural development, of course, is not the only factor influencing how much food India or any other nation imports. Factors such as government trade and economic policies and industrial growth will also be important in determining how much food a country needs and can afford to import. Nonetheless, agriculture is an important sector in India's economy, and if income gains in agriculture could be more widely distributed through the population, demand for food imports could be stimulated.

Summary

The relationship between agricultural development and food imports in developing countries is complex. In some cases, increases in food production may displace food imports, and even lead to exports that compete with American commodities for international markets. In the more general case, however, where agricultural growth stimulates broader economic development, it can help overcome the income and foreign exchange constraints that currently limit developing country food imports, making them better customers for American commodities. As developing countries increase their agricultural production and trade, the more competitive sectors of American agriculture will tend to benefit. The following chapter discusses some of the economic policies that the United States can implement to foster the greatest possible complementarities between developing country agricultural growth and U.S. agricultural exports.

FOOTNOTES

²¹Kellogg, *op. cit.*, p. 9.

²²Kellogg, *op. cit.*, p. 11.

²³J. S. Sarma, "Cereal Feed Use in the Third World: Past Trends and Projections to 2000," (1986), Washington, D. C.: International Food Policy Research Institute, p. 10.

²⁴Gary Vocke, "Economic Growth, Agricultural Trade, and Development Assistance," (1987), Washington, D. C.: United States Department of Agriculture Economic Research Service, Agriculture Information Bulletin Number 509, p. 2

²⁵*Ibid.*

²⁶Robert L. Paarlberg, "U.S. Agriculture and the Developing World: Partners or Competitors?" (1987), in Randall B. Purcell and Elizabeth Morrison eds., *op. cit.*, p. 224.

²⁷*Ibid.*, pp. 224-25.

²⁸Cheryl Christensen, Michael Lofchie and Larry Witucki, "Agricultural Development in Africa: Kenya and Tanzania," (1987), in Randall B. Purcell and Elizabeth Morrison eds., *op. cit.*, p. 57.

²⁹Food and Agricultural Organization of the United Nations, (1978 and 1984), FAO Trade Yearbook, Rome, p. 308 (1978) and p. 314 (1984).

³⁰Food and Agriculture Organization of the United Nations, (1984), FAO Production Yearbook, Rome, p. 86.

³¹Food and Agriculture Organization of the United Nations, (1978 and 1984), FAO Trade Yearbook, Rome, p. 336 (1978) and p. 344 (1984).

³²Kellogg, *op. cit.*, p. 13.

VII. U.S. POLICY ALTERNATIVES AND EFFECTS ON EXPORTS

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- **What U.S. policies might stimulate demand for American agricultural commodities among developing countries?**
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The preceding discussion has demonstrated that under certain conditions agricultural growth in developing countries can lead indirectly to increased imports of American farm products, but that it is certainly not reasonable to expect such a relationship to develop automatically in all cases. Is there anything that the United States can do then, to increase the likelihood that such a complementary pattern will develop? How can U.S. policies be formulated to foster such complementarities? As discussed, the United States might be able to stimulate economic development and effective demand for food imports by offering agricultural development assistance to developing countries. But such direct intervention is only one of many United States policies that could shape future trends in food imports by developing countries. Perhaps even more important are broader macroeconomic and trade policies.

Fiscal and Monetary Policies

A number of modifications of American macroeconomic policies, as discussed in Chapter 2, could improve the global environment for agricultural trade. Reduction of the federal budget deficit and a loosening of monetary policy could help bring down interest rates. Lower interest rates would be generally conducive to economic expansion and increased trade worldwide. In particular, lower interest rates in the United States could slow the inflow of foreign investment and bring down the value of the dollar. The value of the dollar has, in fact, dropped significantly since 1985. The fact that a commensurate rebound in foreign sales of American agricultural products overseas has not taken place indicates that the value of the dollar

Lower interest rates can stimulate economic expansion and increased trade.

cannot be considered the sole determining factor behind changing levels in American exports. Rather, it is one of many interacting factors influencing trade. All other things equal, a lower dollar will tend to make American goods more competitive internationally, but the importance of this one factor should not be over-emphasized. Another effect of lower interest rates would be to ease the debt burden of developing countries and enable them to expand imports.

Developing Country Debt

The payments that developing countries make on their outstanding loans drain their foreign exchange reserves, directly restricting the quantity of food that they can import. But external debt also depresses their levels of imports indirectly. When developing countries are obliged to devote important shares of their national incomes to debt servicing, they are left with fewer funds to invest in domestic economic development. If such capital constraints retard economic development, then the scenario hypothesized above -- economic development leading to increased food imports -- will be impeded.

Can U.S. policies ease this debt burden? Monetary policies aimed at controlling interest rates and a smaller budget deficit would help. In addition, the negotiations that have taken place to reschedule debt repayments might also offer some relief.

By expanding their exports, developing countries could increase their foreign exchange earnings, and effectively reduce their debt burdens. In recent years, however, the U.S. and other industrialized nations have been restricting imports of some goods produced in developing countries, exacerbating their foreign exchange shortages. These import restrictions were imposed to protect domestic industries, and have covered a wide range of agricultural and non-agricultural goods, including sugar, footwear, textiles and steel³³. While such policies lead to short-run benefits for the industries they protect, they also produce a negative fall-out for American agricultural exporters. When developing countries are prevented from earning foreign exchange through exports, their capacity to import food is reduced.

LDC loan repayments drain foreign exchange reserves and restrict the amount of capital goods and food that can be imported.

Developed countries slow LDC growth by restricting their markets to imports from LDCs.

Policies That "Mask Comparative Advantage"

Such protectionist policies are one example of a larger set of policies that, in the words of one author, "mask comparative advantage"³⁴. Other such policies include export subsidies and agricultural price supports. Import restrictions, export subsidies and farm price supports all distort the economic signals that allow the principle of comparative advantage to operate. Such policies tend to "prop up inefficient firms and industries [and] reduce the global competitiveness of the American economy as a whole"³⁵. While it would be naive to suggest that all protectionist policies, export subsidies and price supports be removed overnight, a general move toward freer trade along the lines of comparative advantage could be beneficial to the economy as a whole, and to the agricultural sector in particular. Such structural adjustment may entail painful dislocations in the short-run, as inefficient industries are forced to contract or shut down, but promises greater long-run benefits, as efficient enterprises are able to grow in a more prosperous international marketplace.

Summary

Certain policy actions could foster the expansion of agricultural imports by developing countries. Agricultural development assistance can be an important starting point. But such interventions will be insufficient if the global macroeconomic and trade environment is not conducive to expanding both the exports and imports of developing countries. Lower interest rates and reductions in the budget deficit could stimulate the world economy, bring down the value of the dollar, and ease the debt burden. Finally, policies encouraging freer trade according to comparative advantage could improve the potential for export expansion in the long-run.

FOOTNOTES

³³ Robert L. Thompson, "Global Competitiveness of American Agriculture: The Role of National Economic Policies," (1986), Remarks at the Conference on the Competitive Position of Southern Agriculture in a World Economy, Atlanta, Georgia, November 5, 1986, p. 16.

³⁴ *Ibid*, p. 11.

³⁵ *Ibid*, p. 21.

Trade restrictions and agricultural policies can mask comparative advantage.

A variety of policies influence U.S. export performance.

VIII. INTERNATIONAL COMPETITION FOR EXPORT MARKETS

-
- Has increased food production in LDCs influenced the recent decline in U.S. agricultural exports?
 - Are developing countries increasing their exports and displacing market shares from the United States?
 - Is American agricultural assistance to developing countries detrimental to the interests of American farmers?
-

In the majority of cases, as discussed in Chapter 6, where American agricultural assistance to developing countries stimulates economic development and effective demand for food imports, it can be beneficial both to farmers in the developing countries and to American food exporters as well. On these grounds, agricultural assistance to foreign countries might be justified as an instrument for promoting the interests of farmers in the U.S.

American Opposition to Foreign Agricultural Assistance

Such an argument, however, contradicts a strong current in American thought on foreign aid. Particularly among farmers and commodity groups, there is a concern that American agricultural assistance to developing countries has been in part responsible for the decline in U.S. exports. This belief is founded on the assumptions that American development assistance has been successful in promoting agricultural growth in developing countries, and that this growth has led to a decrease in their food imports, and an increase in food exports by developing countries. Arguing that American development assistance has hurt American farmers, a number of agricultural organizations have lobbied their congressmen to pass legislation restricting the U.S. government's support for agricultural development programs overseas.

Trends in Agricultural Production and Exports in Developing Countries

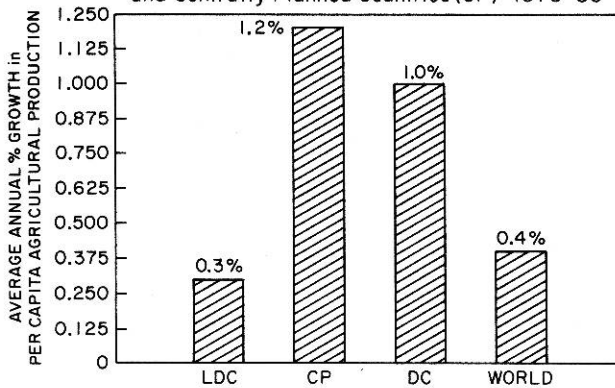
In spite of this current in public opinion, historical evidence indicates that increased

Increased food production in LDCs has not been an important factor in the recent drop in American agricultural exports.

Because of population increases, per capita agricultural production growth in LDCs has been limited.

FIGURE 8-1

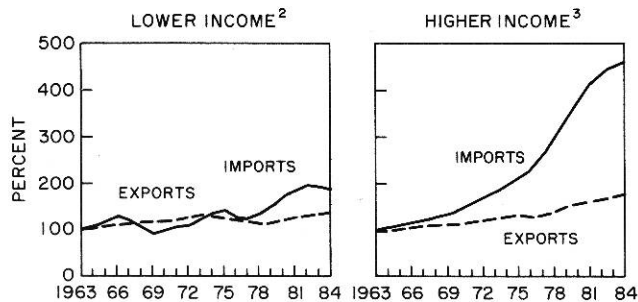
Average Per Capita Growth Rates in Agricultural Production for Developed (DC), Less Developed (LDC) and Centrally Planned Countries (CP) 1976-85



Source: U.S. Agriculture and Third World Development: Critical Linkage, 1987

FIGURE 8-2

Agricultural Imports and Exports by Lower and Higher Income Developing Countries 1963-84



1- PERCENTAGE OF 1961-63 AVERAGE USING DEFLATED 3-YEAR AVERAGES
 2- INCLUDES 59 COUNTRIES SUCH AS INDIA, MALAWI, BURMA, MOROCCO, & COLOMBIA
 3- INCLUDES 23 COUNTRIES SUCH AS TAIWAN, MEXICO, BRAZIL, S. KOREA, & ARGENTINA

Source: USDA Economic Research, Ag Info Bulletin #509, March 1987

agricultural productivity and exports by developing countries have not been a factor of any importance in the recent drop in agricultural exports from the U.S. First, the supposition that the drop in U.S. exports coincided with a large increase in production in developing countries is simply incorrect. Total growth rates for developing country agricultural production have been relatively strong, but their per capita production has been virtually stagnant, growing at a rate of only .3 percent per year from 1976-85. In comparison, per capita agricultural production in developed nations grew by 1 percent per year over the same period, while the centrally planned countries expanded their per capita output by 1.2 percent annually (Figure 8-1). Increased agricultural production in developing countries, therefore, could not have been the principal cause of declining American exports. The question that seems to emerge from this evidence is not to what extent American agricultural assistance has stimulated competitive production, but why, given the significant resources that have been devoted to development assistance, production in developing countries has grown so slowly?

Trade statistics also fail to support the proposition that increased exports from developing countries have been an important factor in the drop in U.S. exports. It is true that the total value of agricultural exports from developing countries has been rising. In 1984, the value of agricultural exports from developing countries were roughly 67 percent higher than in 1975. But over the same period, agricultural imports by developing countries were also rising, and at a faster rate. From 1975 to 1984, the value of their agricultural imports about doubled³⁶. Over about the last decade, increases in imports by developing countries have more than offset moderate increases in their exports. Moreover, developing countries have been losing world market shares of agricultural exports. In 1970, 38 percent of all world agricultural exports originated in developing countries. By 1980, this share had fallen to 32 percent, and by 1983 it had been further reduced to 29 percent³⁷. The net impact of these changes in the trading patterns of developing countries has been to expand world markets for food exporters. In both lower and higher income developing countries, agricultural imports have been growing faster than agricultural exports, and this effect has been most

pronounced in higher income developing countries (Figure 8-2).

Competition for Export Markets Among Industrial Nations

Where drops in U.S. exports were precipitated by foreign competition, the competition has come primarily from other industrial nations. In contrast to developing countries, developed nations have increased their exports of agricultural commodities more rapidly than their imports. From 1975 to 1984, the value of their imports increased by about 47 percent, while the value of their exports increased by about 72 percent³⁸. At the same time, developed nations other than the United States moderately increased their market share of international agricultural trade. In 1975, the other developed nations produced 44 percent of all agricultural goods traded. By 1983, this share had risen to 49 percent. The U.S. share of world agricultural export markets "has remained relatively constant"³⁹.

Some of the stiffest competition that the U.S. faces in export markets comes from the European community, an economic and political alliance made up of twelve Western European nations. Since the 1970s, the European Community has encouraged production by offering price supports to farmers. Artificially high prices have led production to exceed consumption, and surpluses have resulted. Export subsidies have helped the European Community to dispose of its surpluses, and have fueled strong growth in its exports. The European Community now exports a number of commodities -- including cereals, beef and sugar -- that it was importing as recently as 1970⁴⁰. Such competition from other developed countries has made it increasingly difficult for American farmers to export their products.

Although the greatest competition for export markets that the United States faces comes from developed nations, there are some important cases in which exports from developing countries compete directly with U.S. commodities. Argentina competes with the U.S. in wheat (although it should be noted that Argentina has not recently received any agricultural assistance from the U.S.⁴¹); Brazil and Argentina compete with the United States in

Competition for American exports has not come from LDCs, but from the developed countries and centrally planned economies.

Other developed countries are our stiffest competition for agricultural export markets.

U.S. development assistance can benefit American agriculture.

soybeans; and Thailand competes with the United States in coarse grains. Nonetheless, growing exports from other developed nations, including Canada, the European Community and Australia, have had a larger impact on the level of U.S. exports than have exports from developing nations.

Summary

Criticism of American development assistance on the grounds that it stimulates competitive production in developing nations appears largely unfounded. Agricultural production in developing countries has barely kept up with population growth, and their imports have grown faster than their exports. Greater export competition has come from other developed nations. Further, the most important factor in the decline in U.S. exports probably had less to do with direct competition during the first half of the 1980s from other countries than with U.S. farm policy, macroeconomic policies and the international economic climate. The idea that American agricultural development assistance or agricultural growth in developing countries are major sources of the ills of American farmers is, in general, contradicted by historical evidence.

FOOTNOTES

³⁶Food and Agriculture Organization of the United Nations, FAO Trade Yearbook 1984, p. 35.

³⁷Kellog, op. cit., p. 4.

³⁸Food and Agriculture Organization of the United Nations, op. cit.

³⁹Kellog, op. cit., p. 6.

⁴⁰George E Rossmiller and M. Ann Tutwiler, "Agricultural Development and Trade: Broadening the Policy Horizon," in Randall B. Purcell and Elizabeth Morrison eds., op. cit., p. 149.

⁴¹Kellogg, op. cit., p. 7.

SUMMARY AND CONCLUSIONS

The U.S. farm economy is affected by the rise and decline of LDC economies.

Agricultural development can stimulate demand for food.

American farmers suffered from a decline in agricultural exports. Traditional markets for agricultural products in industrial countries have leveled off, as these nations increase their own production and their demand stagnates. In developing countries, on the other hand, production has barely kept up with population growth and food deficits persist. Food imports by these countries contributed to the boom in U.S. agricultural exports in the 1970s, and LDCs show promising growth potential as markets for agricultural products. If they are to continue to expand their imports, however, they must be able to increase their incomes and foreign exchange earnings.

Agricultural development in poor countries can play a vital role in stimulating broader economic growth. Improvements in agricultural productivity can contribute to the income of a large segment of the population, and create a demand for goods and services produced outside of the agricultural sector. Because many people in developing countries are poorly nourished, increases in income will be used to increase food consumption. In particular, increased demand for meat products can lead to a rapid increase in demand for feed grain. Development in agriculture, then, can generate the increases in income that will be necessary if developing countries are to meet a larger part of their food needs with expanded imports.

Increased food production in developing countries can result in increased food imports. Although this idea may be surprising, it is supported by historical evidence. The increase in food imports by developing countries that occurred during the 1970s coincided with

increases in production. Imports were increased because income and consumption were rising, not because of shortfalls in production⁴². The developing countries that increased their food imports most rapidly were those that were experiencing the greatest growth in agricultural production. Similarly, the idea that increased exports from developing countries have been a harmful source of competition with American exports is generally contradicted by historical evidence. Over the last fifteen years, developing countries have been increasing their food imports faster than their exports. They have on the whole been losing, rather than gaining, world market shares of agricultural exports.

There are of course exceptions to these generalities. For example, exports of soy products from Brazil and coarse grain from Thailand may be hurting American producers of these commodities. But overall, agricultural development in developing countries will tend to benefit American farmers by stimulating imports more than it hurts them through competition for world export markets.

Such a pattern of development in poor countries -- improved agricultural productivity leading to economic growth and greater food imports -- is one of the most important ways in which markets for American agricultural exports may expand in the future. American agricultural assistance to developing countries, therefore, is not only a form of humanitarian and political aid, but can also serve the interests of American producers and exporters of agricultural products. America's agricultural development programs overseas can benefit farmers in developing countries and in the United States alike.

Direct assistance to agriculture, however, is only one way in which the United States can help stimulate foreign demand for agricultural commodities. Other broader trade and economic policies will also play a critical role. For American farmers to reap the benefits of expanding markets for their products in developing countries, those countries must be able to grow economically and they must be able to earn foreign exchange with which to purchase American commodities. Policies of the United States and other industrial nations that restrict imports from developing countries prevent them from earning foreign exchange and depress their

Agricultural development in LDCs can stimulate the growth of markets for U.S. agriculture.

Agricultural development assistance can benefit both LDC farmers and U.S. farmers.

Protectionist policies can stifle market expansion.

Export subsidies and price supports can undermine our global competitiveness.

economic growth generally. Such policies, therefore, while they may in the short-run protect domestic industries, hurt American exporters by stifling the expansion of foreign markets. In the long-run, trading patterns in which each country exports the goods that it produces most efficiently and imports goods that other countries produce more efficiently can be beneficial to all of the nations involved. Policies that encourage such foreign trade could hurt the American farmers that grow crops that other countries produce more efficiently, but could also stimulate exports of crops that the United States produces competitively.

Agricultural export subsidies and price supports may also undermine the competitiveness of U.S. agriculture. The short-run benefits of such policies must be weighed against their long-run effects on the competitiveness of American commodities on world markets.

The value of the dollar affects our global competitiveness.

In addition to policies aimed specifically at agriculture and trade, general economic policies will also have important effects on the future of American agricultural exports. Although the economic and political ramifications of monetary and fiscal policy are complex, it can be stated generally that lower interest rates could help bring down the value of the dollar, and make American producers more competitive internationally. Lower interest rates would also ease the burden of debt servicing by developing countries, and enable them to use a greater part of their foreign exchange reserves for imports.

It is encouraging to note that these indicators are beginning to move in directions favorable to agricultural exporters. Since 1985, interest rates and the value of the dollar have come down. While the problem of developing country debt is far from resolved, negotiations are at least underway to reach settlements acceptable to both borrowers and lenders. In the second half of the 1980s, we are beginning to see what a World Bank report characterizes as a "Hesitant Recovery"⁴³.

If this hesitant recovery leads to sustained international economic growth, American farmers may benefit from expanding world markets for agricultural products. Such markets are most likely to grow in developing countries, but only if those nations themselves are

economically strong. The U.S. can help expand markets for food in developing countries both by offering direct agricultural assistance and by implementing policies that stimulate trade and economic growth world-wide. Rather than posing a competitive threat to American farmers, agricultural development in developing nations could make these countries increasingly important customers for U.S. agricultural products.

Economic growth in developing countries will benefit American farmers.

FOOTNOTES

⁴²Vocke, op. cit., p. 3.

⁴³World Bank, op. cit.

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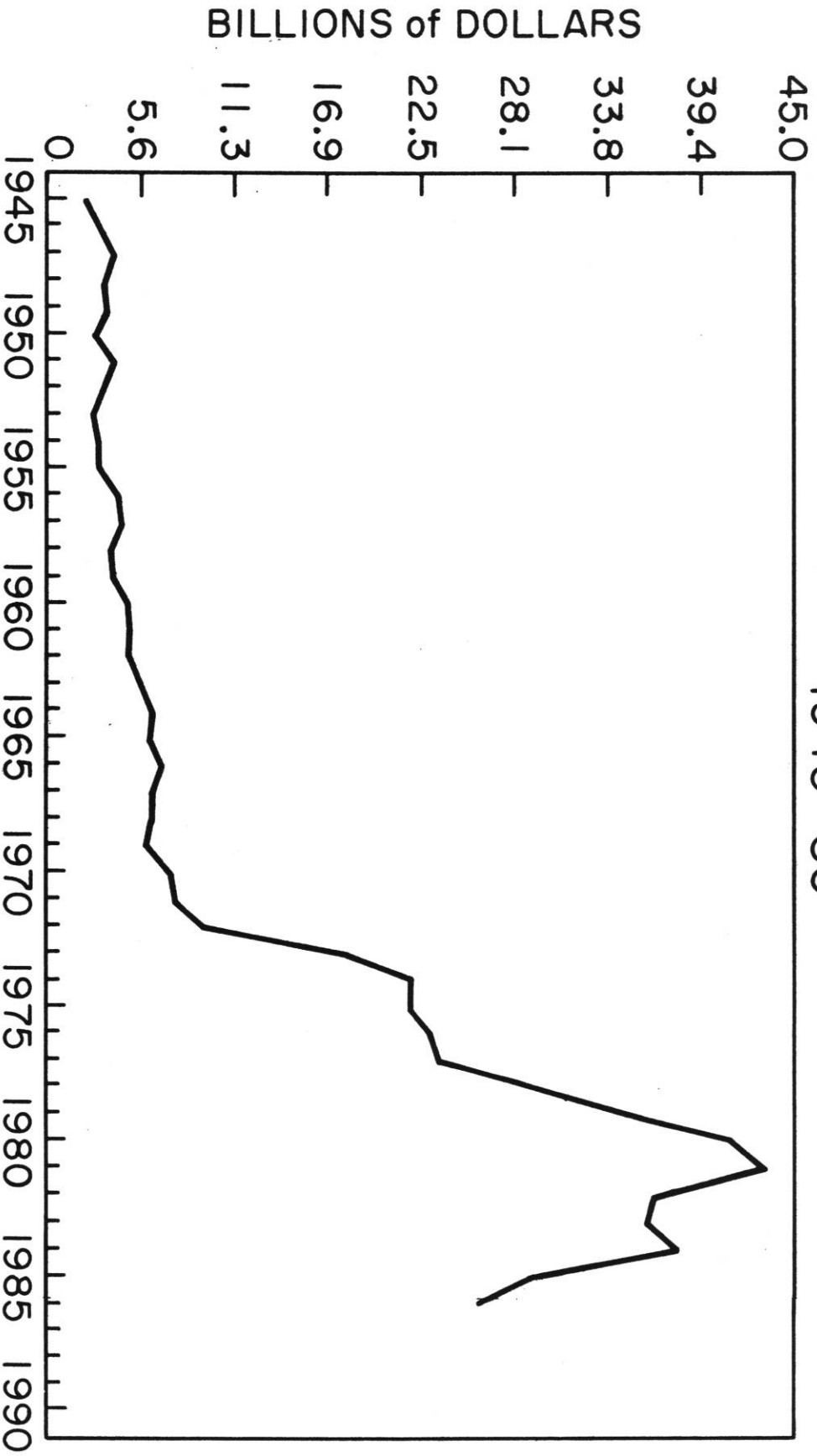
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APPENDIX I
REPRODUCTIONS OF FIGURES
FOR USE ON OVERHEAD
PROJECTORS

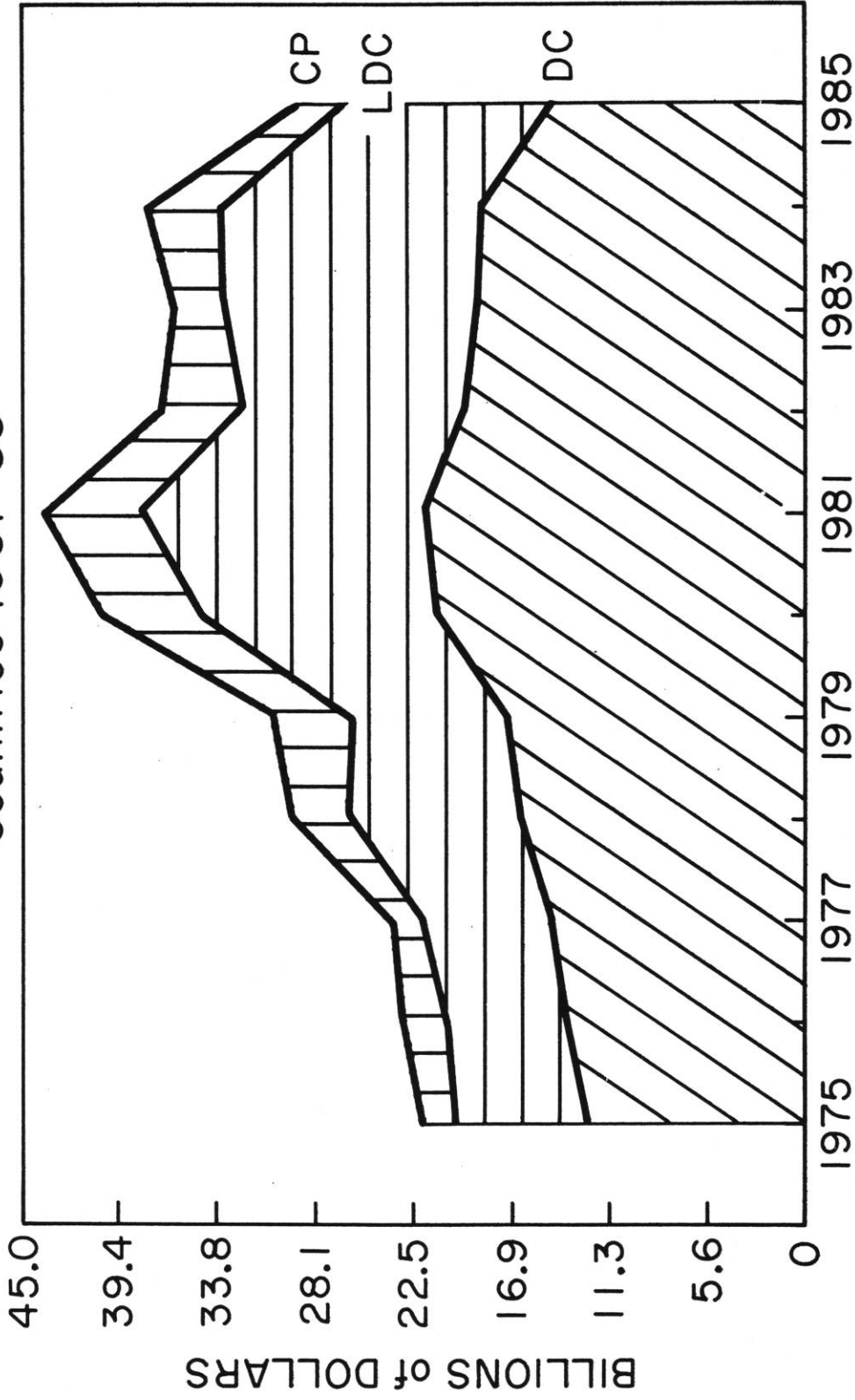
FIGURE 1-1
Value of U.S. Exports of Agricultural Commodities
1945 - 86



Source: Council of Economic Advisers, Economic Report of the President, (1986)

FIGURE I-2

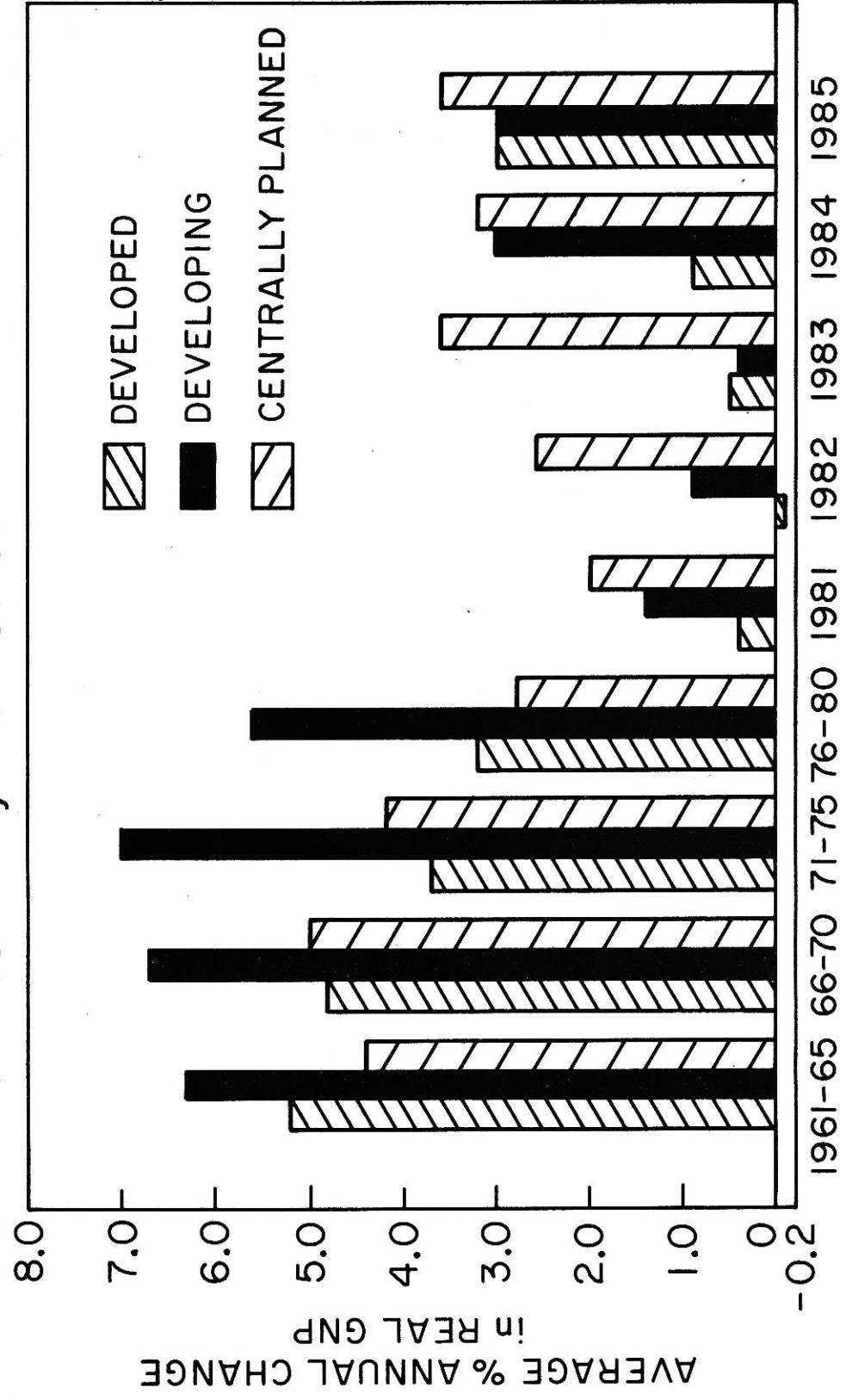
Shares of U.S. Agricultural Exports to Developed (DC),
Less Developed (LDC) and Centrally Planned (CP)
Countries 1961-85



Source : USDA, Foreign Agricultural Trade of the U.S., (1985 and various years)
Washington, D.C. : Economic Research Service

FIGURE 1-3

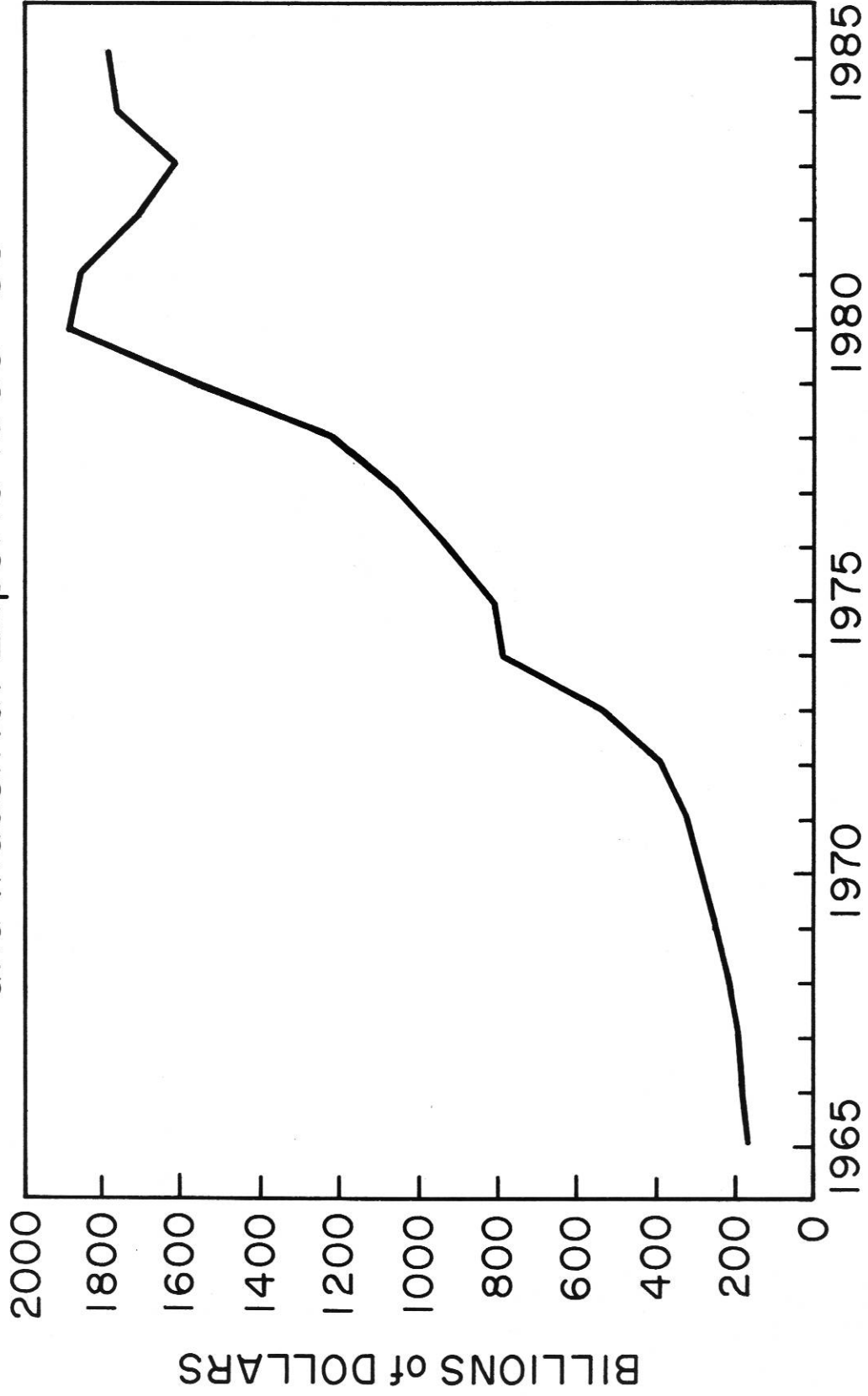
Growth Rates in Real GNP in Developed, Developing and Centrally Planned Countries 1961-85



Source: Council of Economic Advisers, Economic Report of the President, (1986)

FIGURE 1-4

Total Value of World Agricultural
and Industrial Exports 1965-85



Source: IMF, International Financial Statistics Yearbook, 1986

FIGURE I-5a

World Market Shares of Major Exporters of Wheat

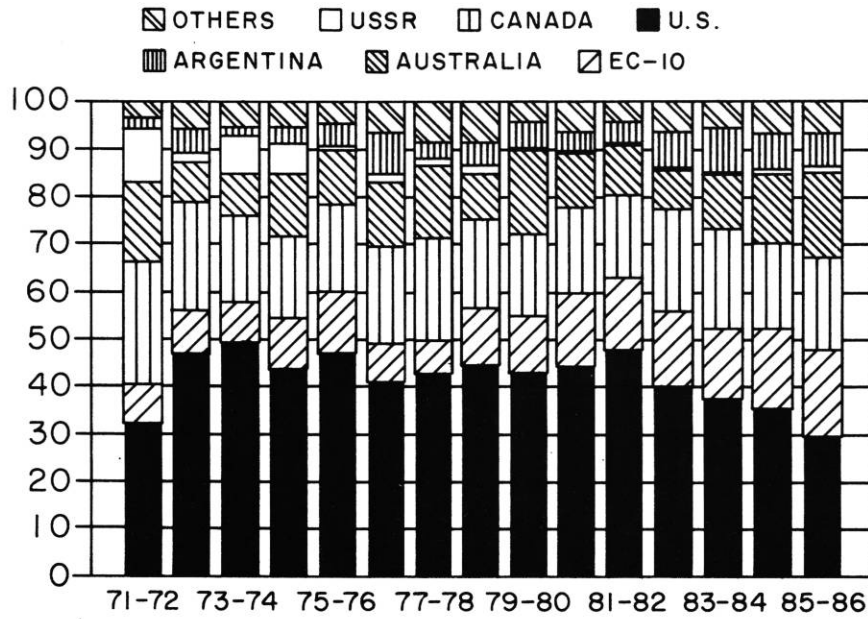
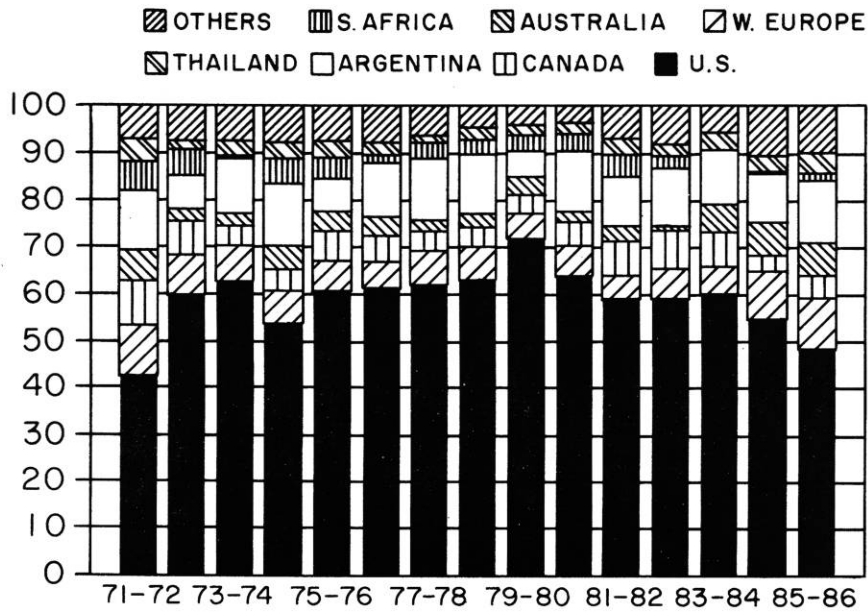


FIGURE I-5b

World Market Shares of Major Exporters of Coarse Grains



Source: World Food Institute, 1986

FIGURE I-6
Value of U.S. Agricultural Imports and Exports
1968-85

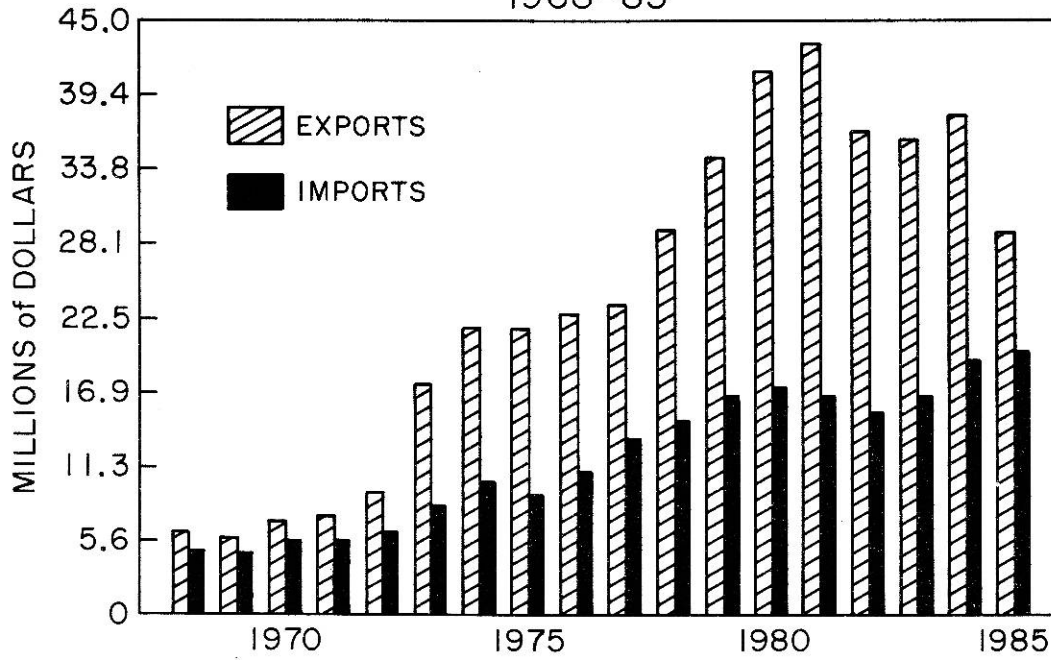
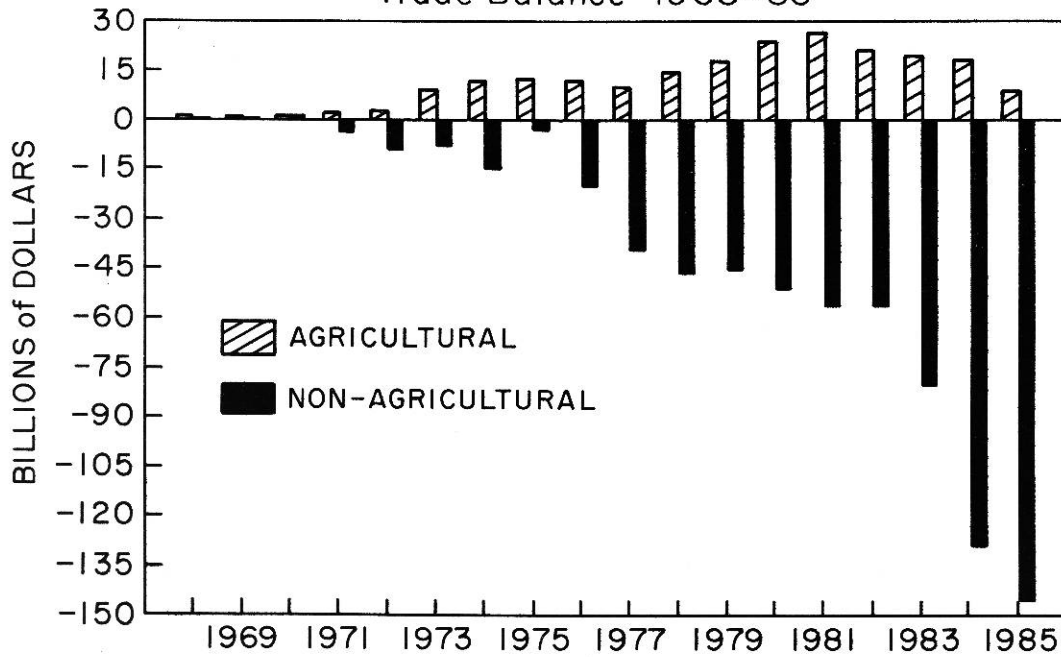


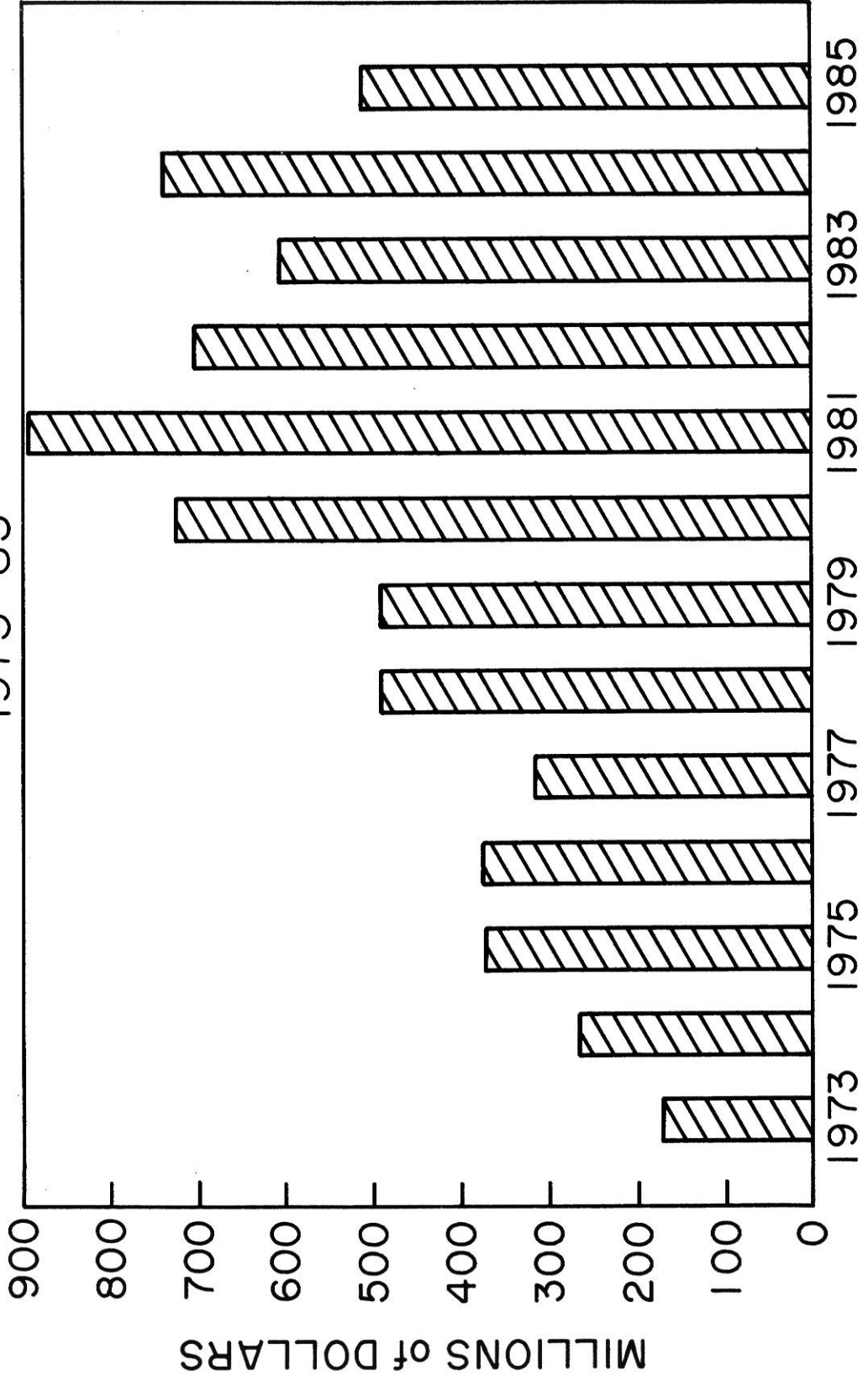
FIGURE I-7
U.S. Agricultural and Non-agricultural
Trade Balance 1968-85



Source: USDA, Foreign Ag Trade of the U.S. Calendar Year 1985 Supplement

FIGURE 1-8

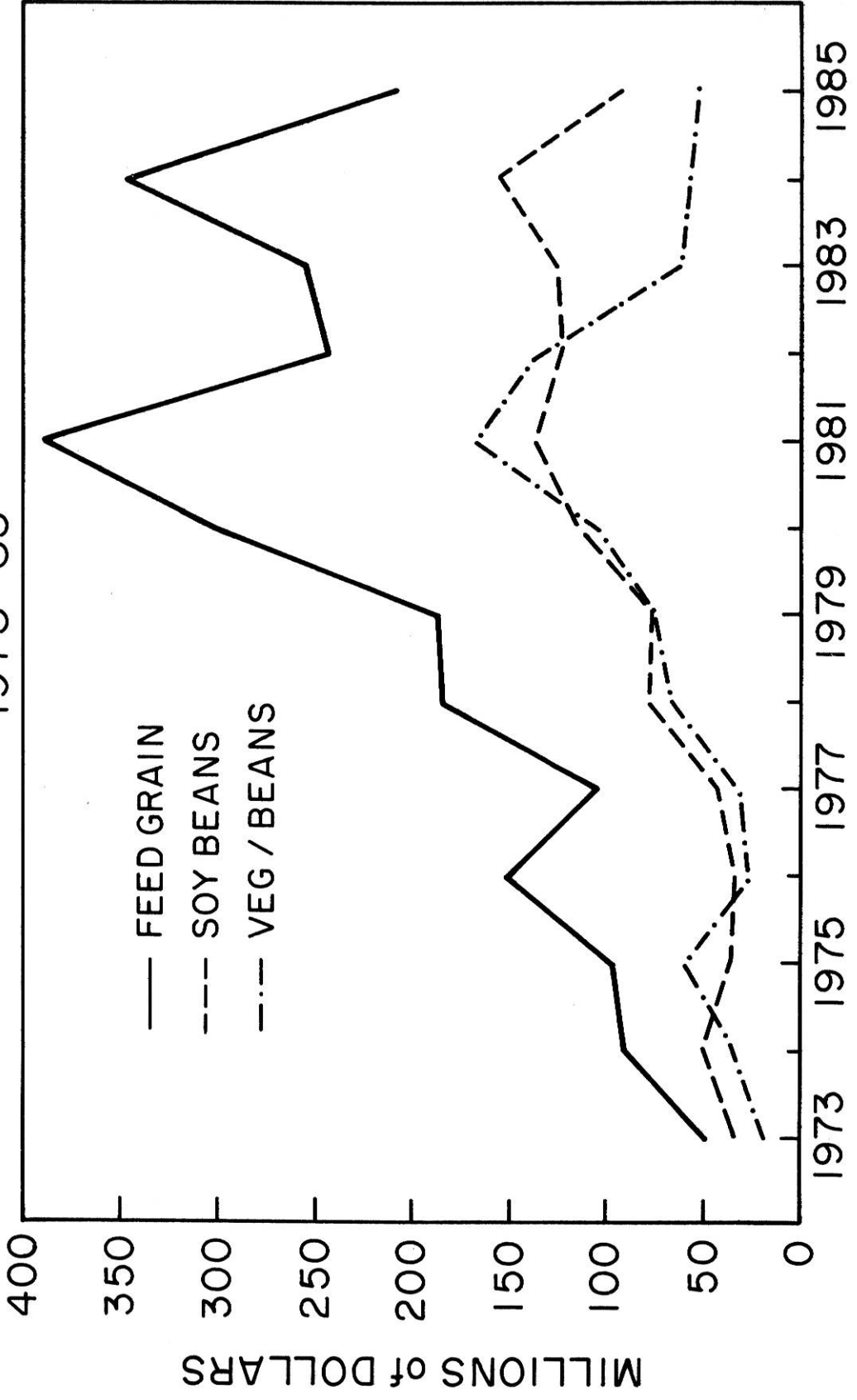
Value of Michigan Agricultural Exports
1973-85



Source: Michigan Dept. of Agriculture, Michigan Ag Statistics, 1986

FIGURE I-9

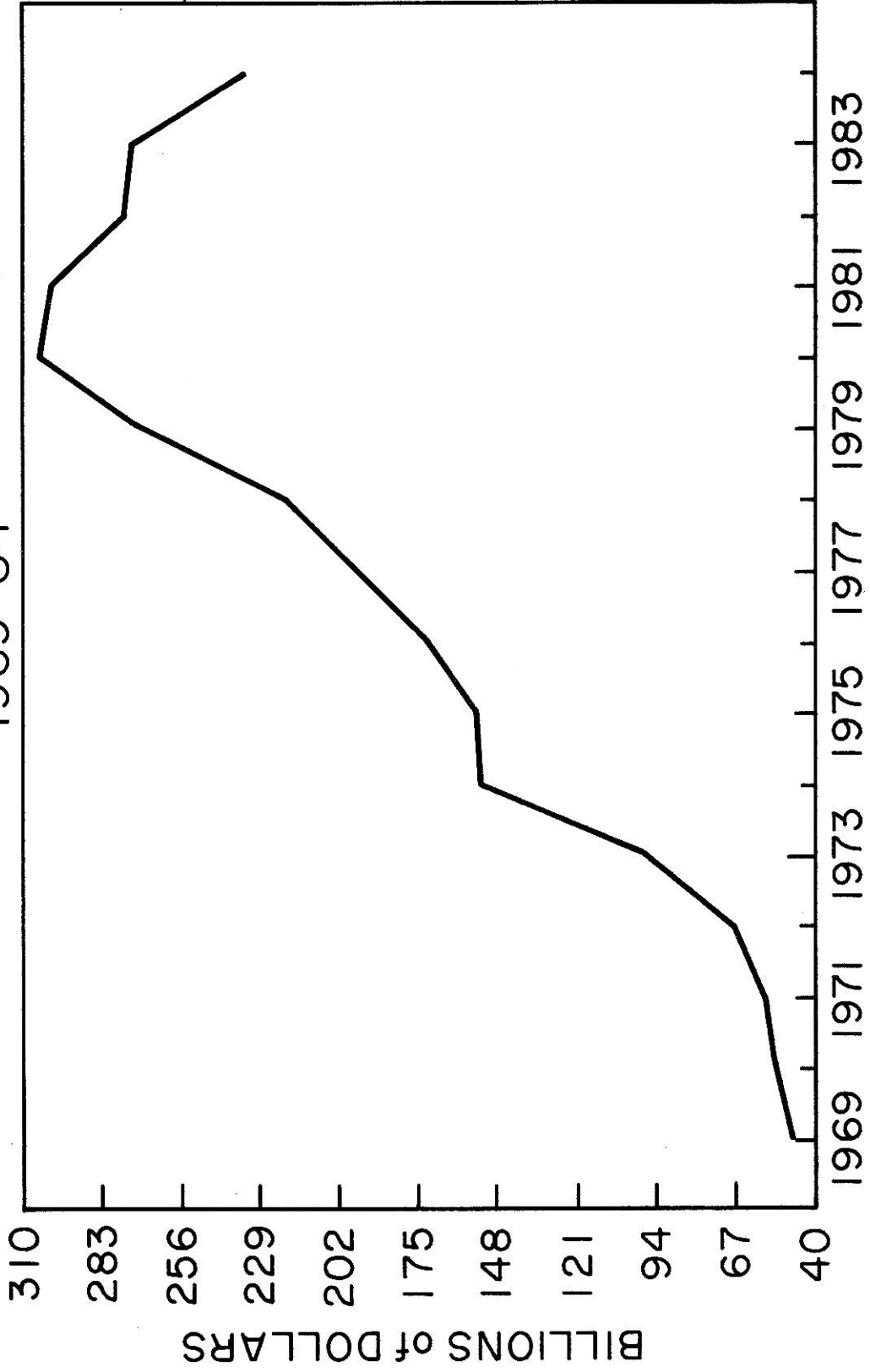
Exports of Major Michigan Commodities
1973-85



Source: Michigan Dept. of Agriculture, Michigan Ag Statistics, 1986

FIGURE I-10

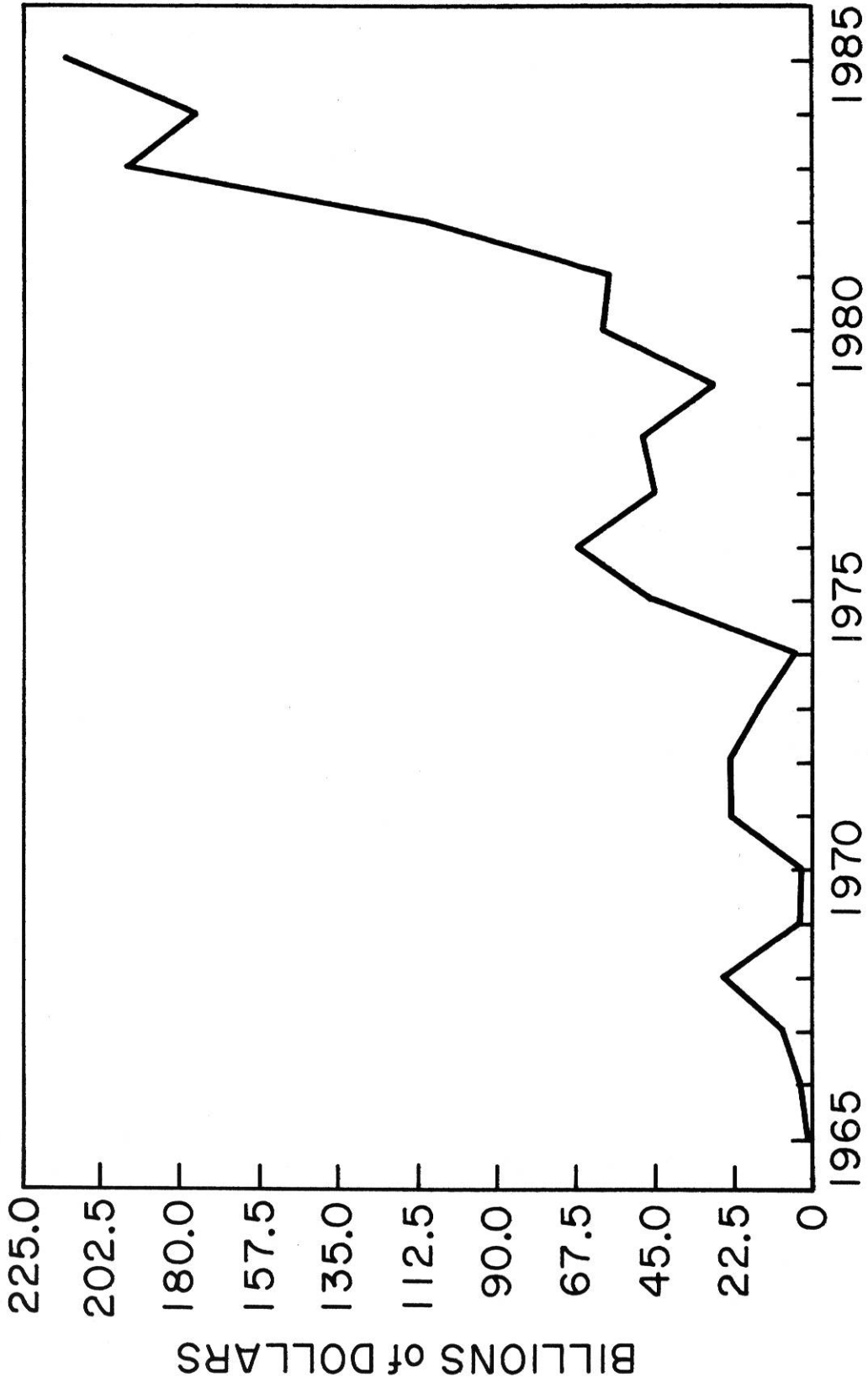
Total Value of World Agricultural Exports
1969-84



Source: FAO of the UN, FAO Trade Yearbook, 1984

FIGURE 2-1

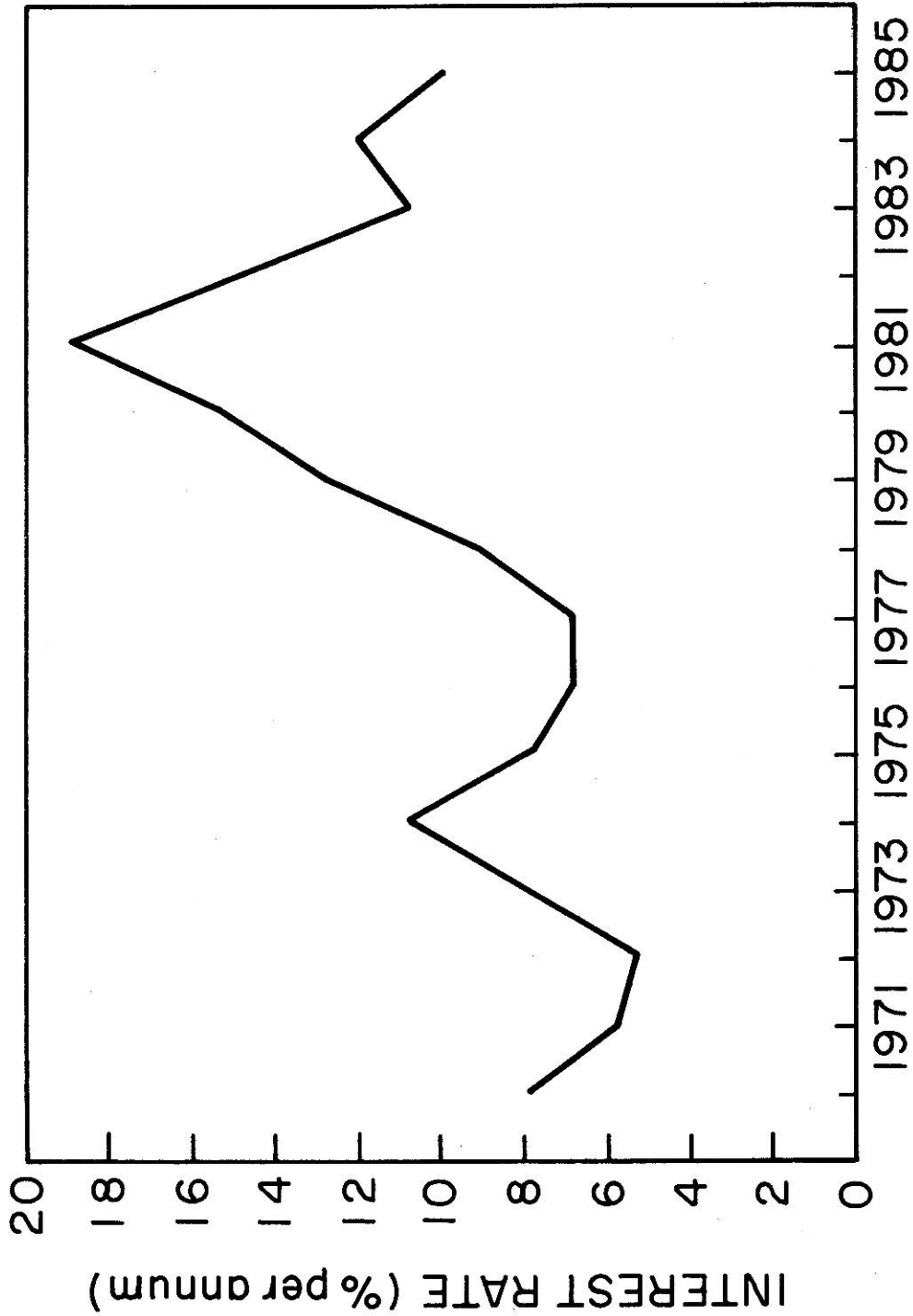
U.S. Federal Budget Deficit 1970-85



Source: U.S. Department of Commerce, Business Statistics: 1984

FIGURE 2-2

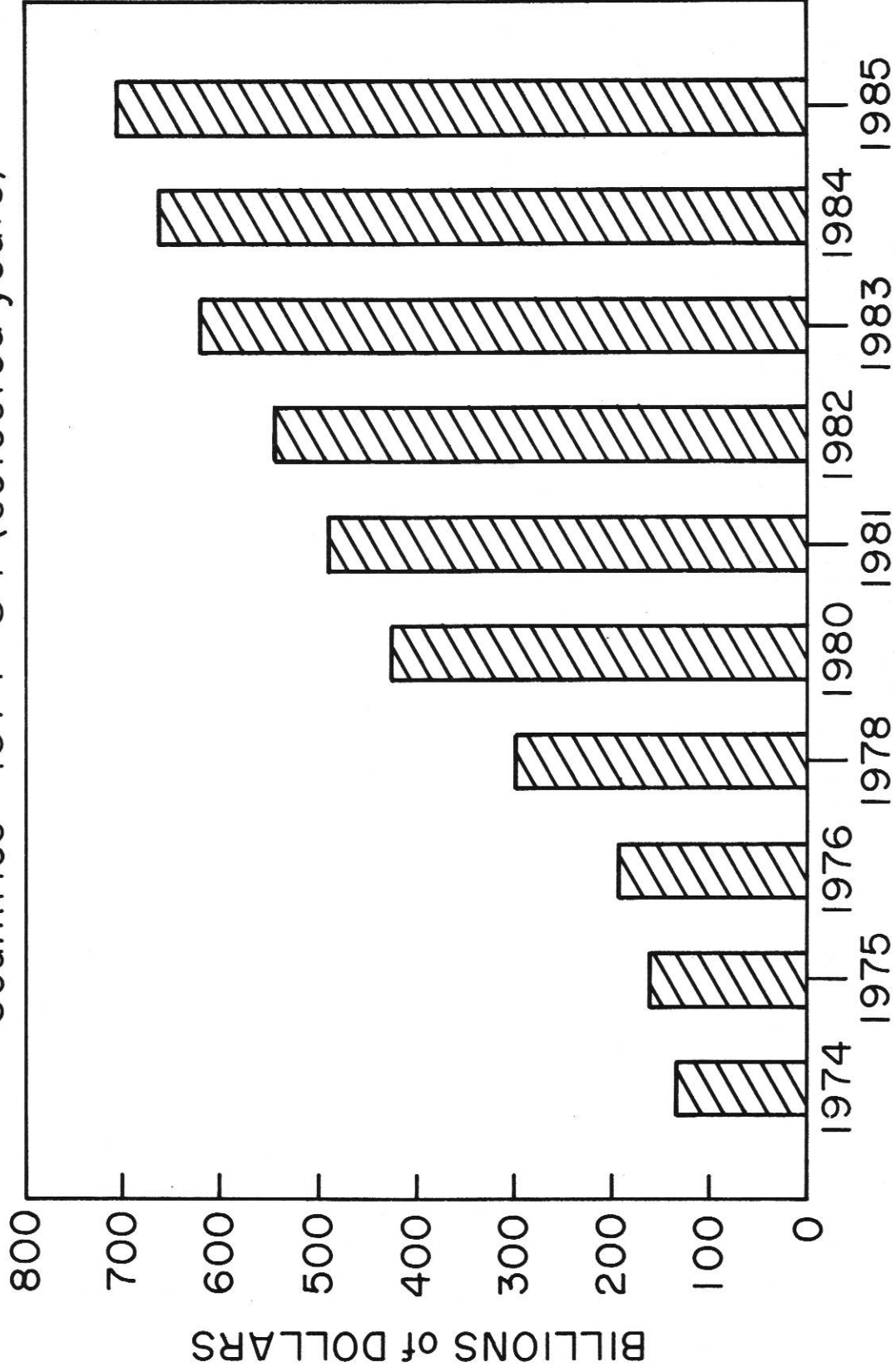
U.S. Prime Interest Rates 1970-85



Source: Council of Economic Advisers, Econ. Report to Pres., 1986

FIGURE 2-3

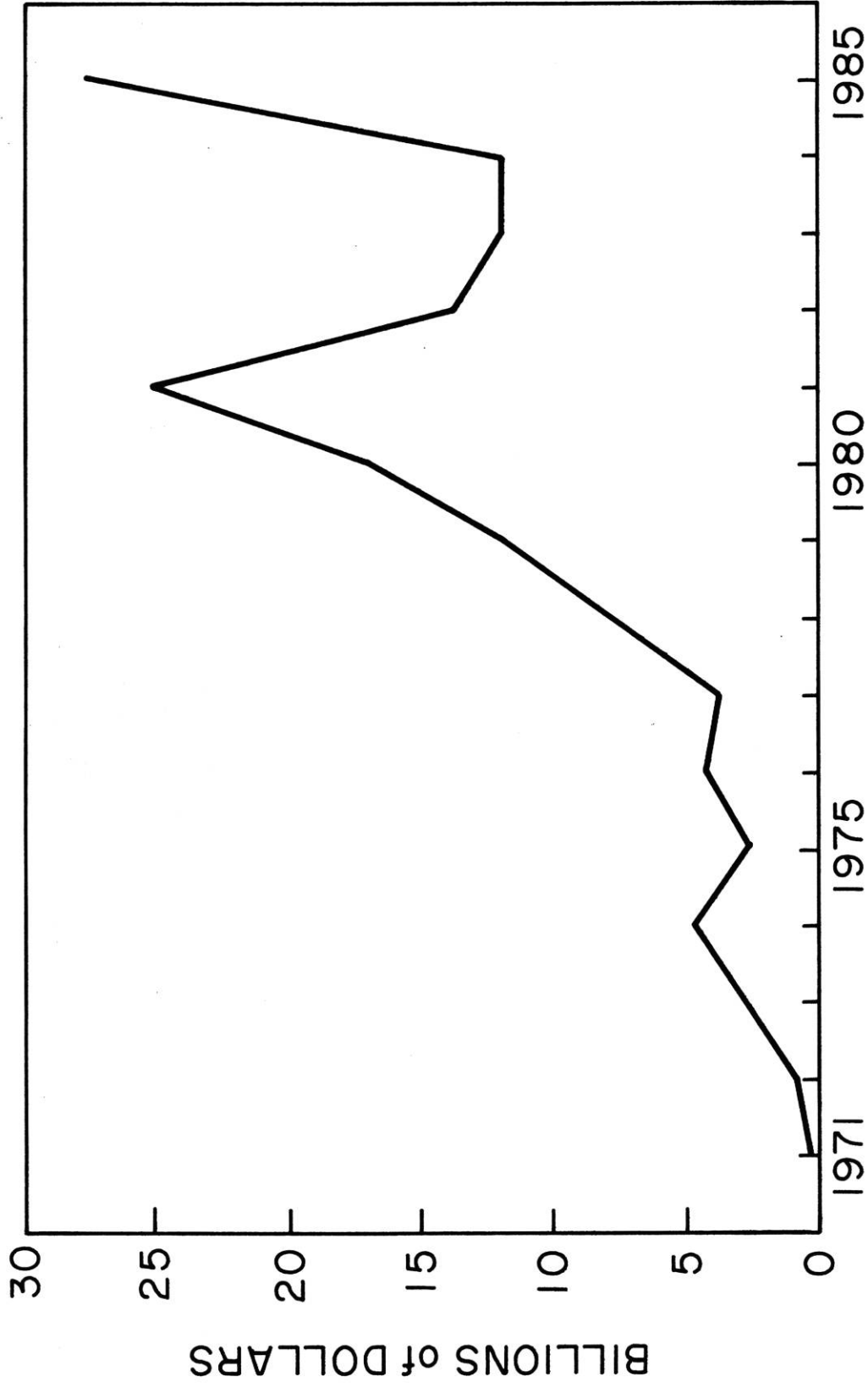
Total Long-Term External Debt for All Developing Countries 1974-84 (selected years)



Source: World Bank, World Debt Trades, 1985-86

FIGURE 2-4

Foreign Direct Investment in the U.S. 1971-85¹

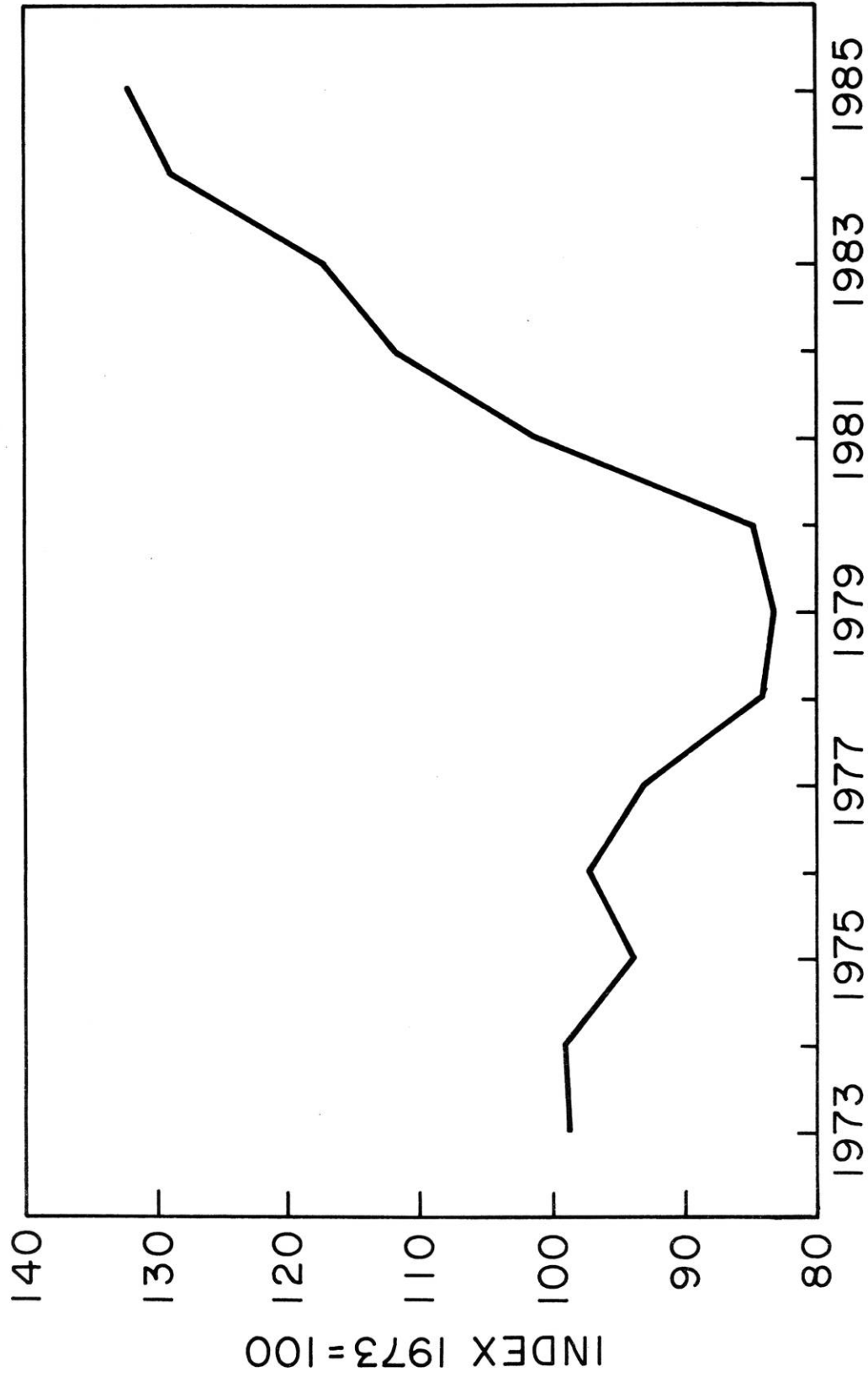


Source : U.S. Dept. of Commerce, Business Statistics : 1984

1 - SEE FOOTNOTE AT END OF CHAPTER II

FIGURE 2-5

Indexed Value of the U.S. Dollar 1973-85



Source: Council of Economic Advisers, Econ. Report of President, 1986

FIGURE 2-6

How U.S. Fiscal and Monetary Policies Affect Exports

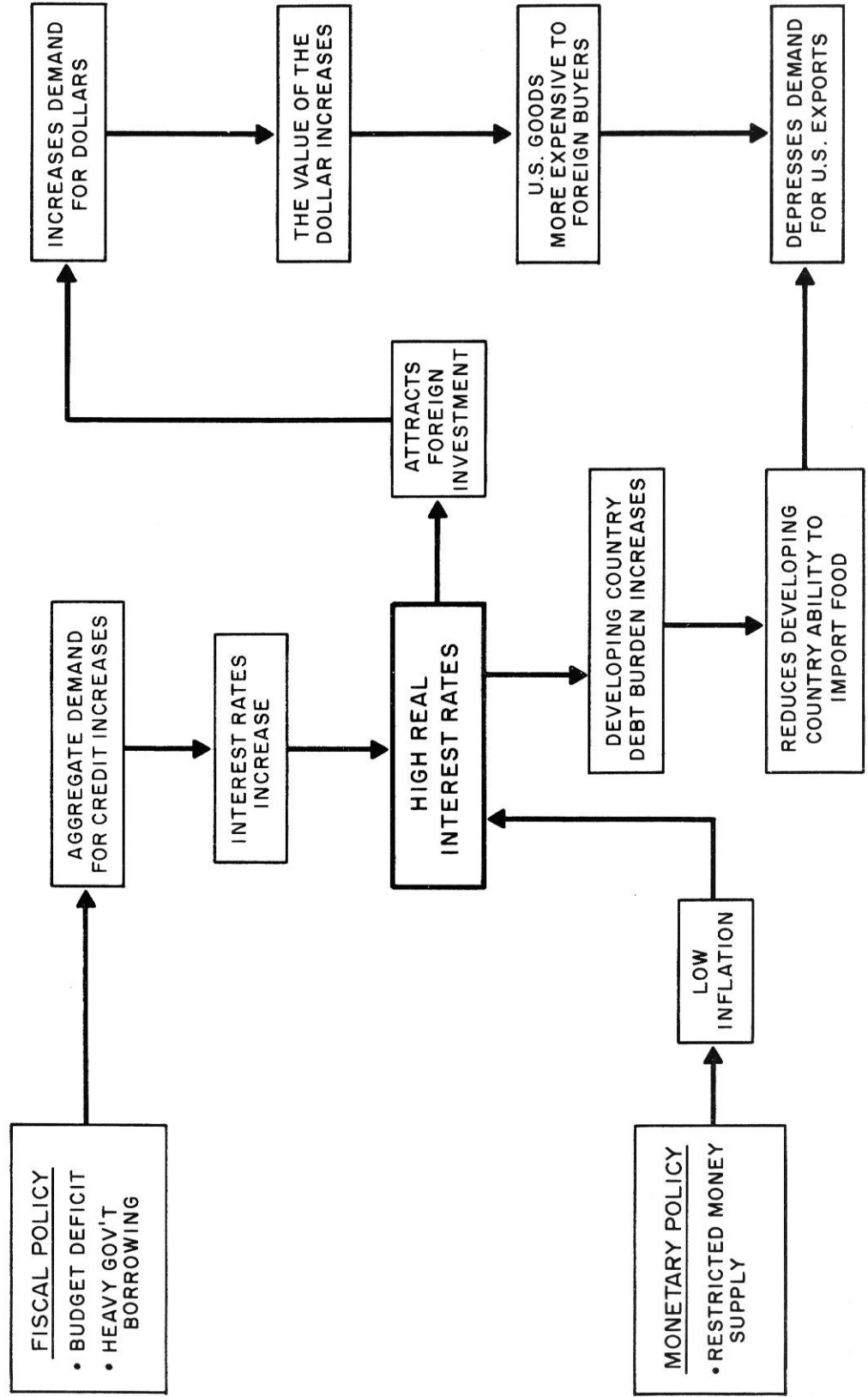
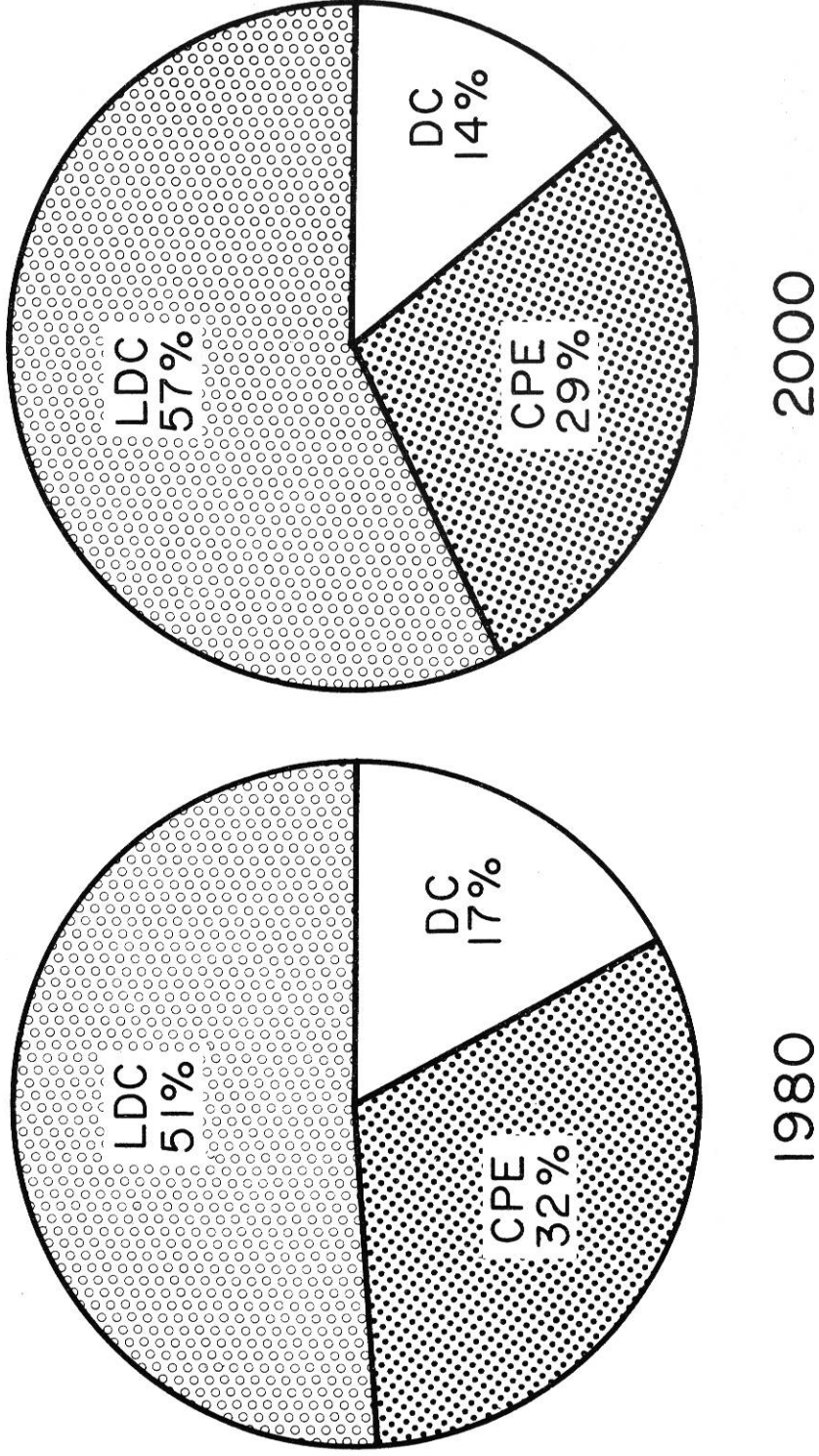


FIGURE 3-1

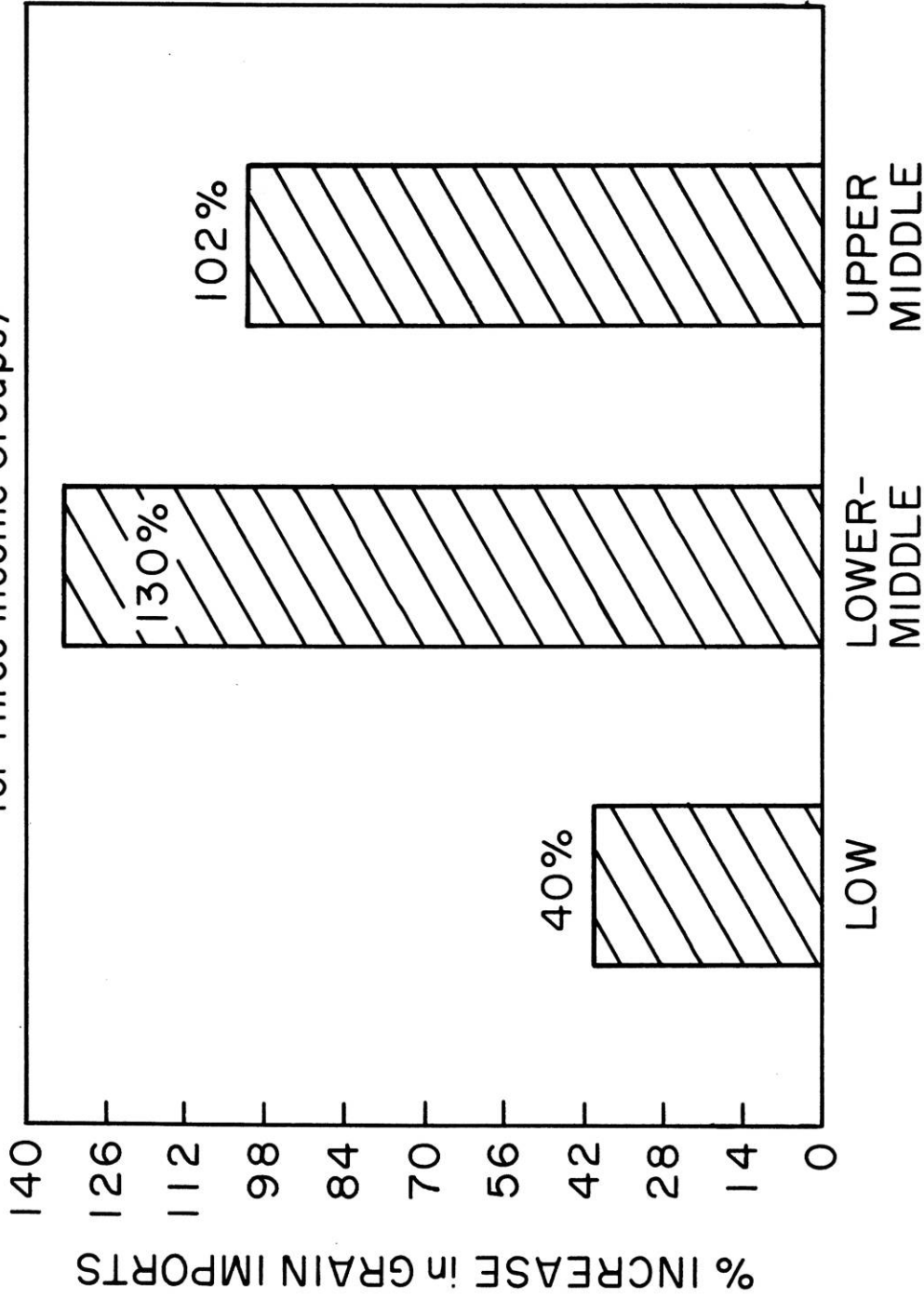
Percentages of World Population Living in Developed (DC),
Less Developed (LDC) and Centrally Planned (CP)
Countries, 1980 and 2000



Source : U.S. Agriculture and Third World
Development : Critical Linkage , 1987

FIGURE 4-1

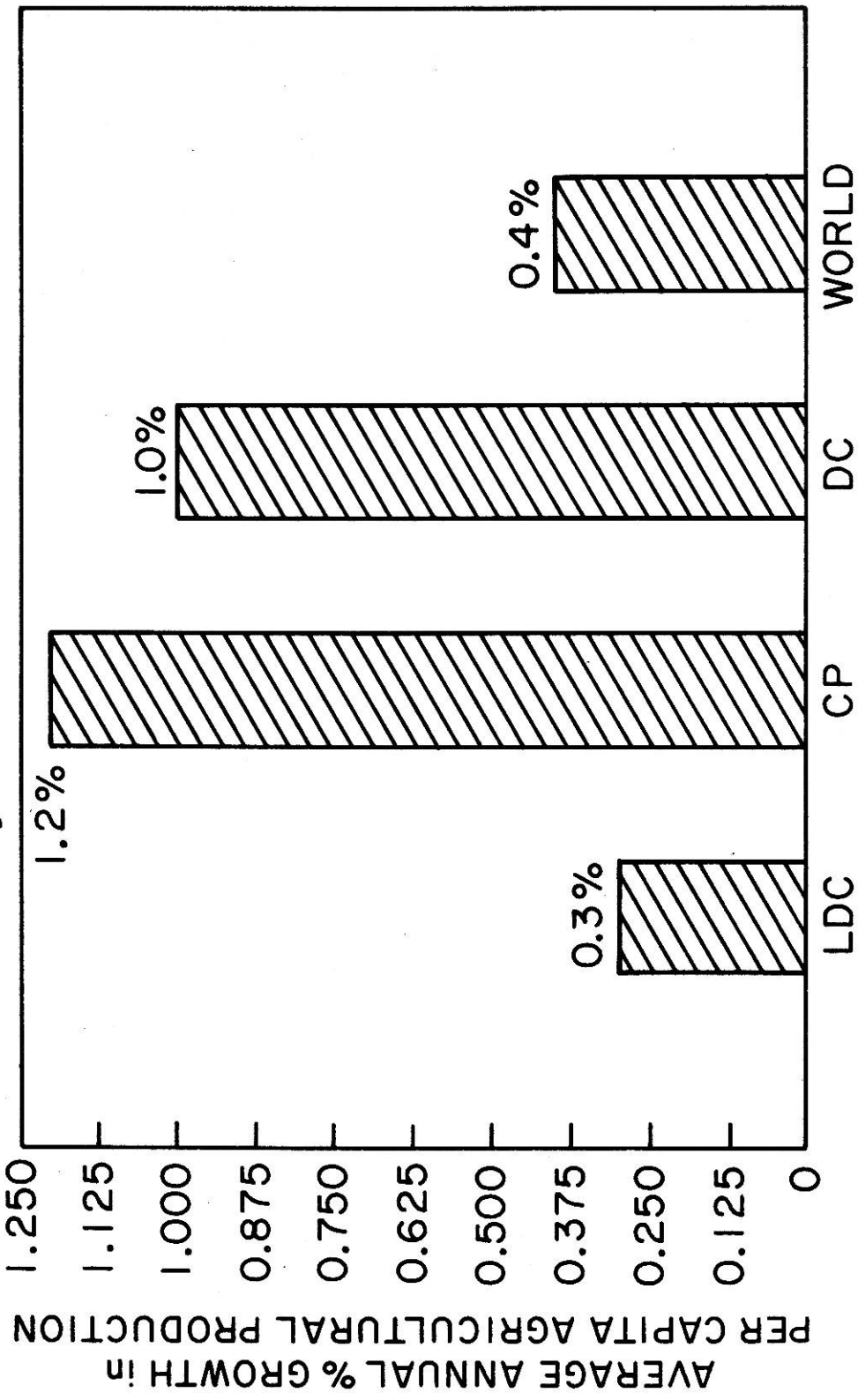
Increases in Total Grain Imports by Developing Countries (Percentage Change 1972-73 to 1982-83 for Three Income Groups)



Source: U.S. Agriculture and Third World Development: Critical Linkage, 1987

FIGURE 8-1

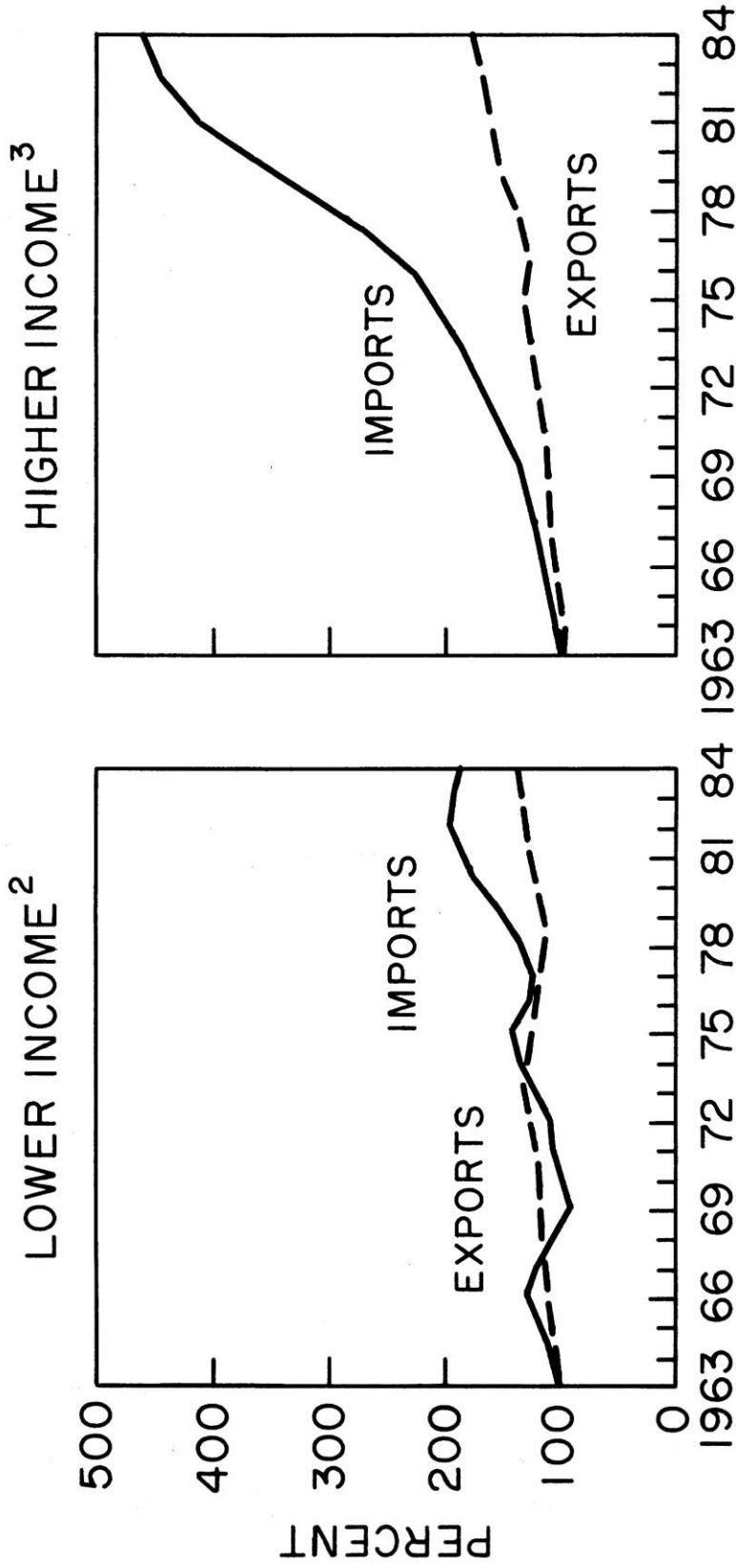
Average Per Capita Growth Rates in Agricultural Production for Developed (DC), Less Developed (LDC) and Centrally Planned Countries (CP) 1976-85



Source: U.S. Agriculture and Third World Development: Critical Linkage, 1987

FIGURE 8-2

Agricultural Imports and Exports by Lower and Higher Income Developing Countries 1963-84



1 - PERCENTAGE OF 1961-63 AVERAGE USING DEFLATED 3-YEAR AVERAGES

2 - INCLUDES 59 COUNTRIES SUCH AS INDIA, MALAWI, BURMA, MOROCCO, & COLOMBIA

3 - INCLUDES 23 COUNTRIES SUCH AS TAIWAN, MEXICO, BRAZIL, S. KOREA, & ARGENTINA

Source: USDA Economic Research, Ag Info Bulletin #509, March 1987

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