



A Review of Macroeconomic Policy Linkages to Agriculture: 1970-1990

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This is the second in a series of four fact sheets designed to educate Kentucky farmers and agribusinesses on macroeconomic policies and how they are linked to agriculture.

Fact Sheet I provides a general discussion of the domestic policy process, identifies the major players, defines various macroeconomic policy tools, and discusses their linkages to the agricultural sector.

This fact sheet (**Fact Sheet II**) reviews the effects of macroeconomic policy changes on U.S. agriculture during the 1970s and 1980s and suggests how potential macroeconomic policy changes could affect U.S. agriculture during the early 1990s.

Fact Sheet III analyzes the impacts of macropolicy changes on Kentucky agriculture and rural communities.

Fact Sheet IV discusses the changing international trade policy environment and its potential impact on the U.S. agricultural economy.

The series also includes a glossary of macroeconomic policy terms.

Introduction

The linkage between various domestic and foreign macroeconomic policies and agriculture was not recognized as very strong before the 1970s. However, with the adoption of the flexible exchange rate system during the early 1970s, coupled with expanded world trade during this same period, changing monetary and fiscal policies in the major industrial nations affected agricultural production, prices, and trade worldwide.

The growing importance of world trade in agriculture during this period prompted many countries to adopt trade restricting policies that were beneficial to domestic farmers, but harmful to consumers and competing farmers in other nations. Thus, the decade of the 1970s is recognized as the beginning of an era in which changing domestic and foreign macroeconomic policies dramatically impacted agricultural economies.

This fact sheet reviews some of the ways that monetary and fiscal policies changed U.S. agriculture during the 1970s and 1980s and examines potential effects during the 1990s.

Monetary Policy Changes

During the early 1970s, the U.S. dollar was devalued twice under the fixed exchange rate system. Policymakers were trying to eliminate deficits in the U.S. balance of payments sustained during the 1950s and 1960s. These devaluations did not achieve the desired results in the international marketplace, causing most

countries eventually to adopt the floating exchange rate system in 1973.

U.S. monetary authorities allowed the dollar to remain fairly stable during the mid-1970s before implementing another series of devaluations during the latter part of the decade. As a result, the value of the U.S. dollar fell considerably during the 1970s (Figure 1).

Recall from Fact Sheet I that a decline in the value of the U.S. dollar makes U.S. goods less expensive in foreign markets while simultaneously increasing the price of imported goods into the U.S. Thus, the falling U.S. dollar helped make U.S. agricultural exports increase from \$7 billion in 1970 to more than \$35 billion by 1979, while the U.S. agricultural trade balance improved from \$1 billion in 1970 to nearly \$16 billion by 1979 (Figure 2).

The expansionary monetary policy stance adopted by the Federal Reserve (along with a large rise in oil prices) fueled large increases in the rate of inflation in the U.S. during the latter half of the 1970s (Figure 3). As a result of escalating inflation and strong commodity prices, land prices rose by more than 15% annually during the mid- to late-1970s (Figure 4).

By the end of the decade of the 1970s, most farmers, agribusinesses, and others associated with U.S. agriculture were rejoicing at the results of a sustained period of expansionary monetary policy. Escalating commodity prices, land prices, and export prospects caused many farmers to make large capital investments in land and machinery. According to many in the agricultural community, U.S. farmers were gearing up to “feed the world” by planting “fence row to fence row” during the 1980s.

However, the expected economic growth did not materialize during the early 1980s, due mainly to an abrupt shift in U.S. monetary policy. By fall of 1979, U.S. inflation had soared to more than 13%, significantly reducing the purchasing power of U.S. consumers.

In response to escalating inflation, the Federal Reserve reversed its stance in October of 1979 from a policy of controlling interest rates to one of controlling inflation. The rate of growth in the money supply was reduced considerably from the expansionary monetary period of the mid-1970s (Figure 5). As a result, inflation began to decline in the early 1980s while interest rates increased substantially (Figure 6).

High interest rates resulted in severe financial constraints on many U.S. agricultural producers during this period. High interest rates, coupled with depressed commodity prices, reduced the demand and value of U.S. farmland during the mid-1980s (Figure 4). Interest expenses accounted for more than 14% of total production costs from 1981 to 1985, compared to around 10% during the late 1970s

(Figure 7).

The depressed agricultural economy caused many farmers to experience severe cash flow problems during the mid-1980s, which reduced their ability to meet debt obligations to banks and to both agricultural and nonagricultural businesses (Figure 8). By 1986, the USDA had classified 10% of U.S. farms as financially vulnerable and an additional 11.7% were categorized as only marginally solvent.

Foreclosures of family farms became a popular media topic. Remaining farmers were forced to cut back on purchased inputs (e.g., fertilizers, machinery, and equipment) which severely limited agribusiness sales. High interest rates also stifled productivity in other sectors of the economy, resulting in a major recession in the U.S. and eventually throughout the world. This further limited the demand for U.S. agricultural products, creating more instability within the agricultural sector.

High nominal interest rates coupled with lower inflation rates boosted real interest rates substantially during the early 1980s, causing the value of the dollar to increase (Figures 1 and 6). U.S. consumers benefited from the strong dollar as lower-priced imports put additional downward pressure on inflation. However, export-dependent sectors like agriculture suffered as U.S. commodities were, in many cases, priced out of the world market during the early to mid-1980s due to the strong dollar.¹

U.S. agricultural exports (trade balance) fell from \$43.8 billion (\$26.6 billion) in 1981 to \$26.3 billion (\$5.4 billion) in 1986 (Figure 2). The short-term benefits of an expansionary monetary policy to U.S. farmers in the 1970s were quickly eroded in the 1980s by a tight monetary policy which had devastating effects on the entire U.S. agricultural economy.

By 1985, the real (inflation adjusted) value of the U.S. dollar against major trading currencies had risen by almost 30% since 1980. This caused much concern not only in the U.S. but throughout the world as our mounting trade deficit produced protectionistic threats within the U.S.

Finance ministers and central bank representatives from major industrialized nations (e.g., U.S., Japan, West Germany, France, the United Kingdom, Canada, and Italy) met in the fall of 1985 to coordinate economic policies to reduce exchange-rate variability and to promote stability in international trade. One of their major goals was to devalue the U.S. dollar by some 10-20%.

They adopted central bank intervention in world financial markets as the initial mechanism to

¹ Besides the high-valued U.S. dollar, inflexible price supports by the 1981 Farm Bill represented another major constraining factor for U.S. agricultural export growth during the early 1980s.

decrease the dollar's value. The Federal Reserve sold U.S. dollars in the world currency market, increasing the supply of dollars in the world market and thus decreasing its value. Foreign policy mixes which increased foreign interest rates also aided the decline in the U.S. dollar, thus reducing demand for U.S. interest-bearing securities.

Subsequently, these factors led to the devaluation of the dollar by more than 20% from 1985 to 1988. The dollar increased briefly during periods of 1988 and 1989 in response to the tightening of U.S. monetary policy when the Fed was trying to control increased inflation brought about by higher food prices (caused by the 1988 drought) and higher energy costs.

By late 1989, inflation appeared under control, and monetary pressure eased. The value of the dollar began to decline again. By the end of the decade, the dollar had declined by more than 30% from its peak in 1985 (Figure 1). U.S. agricultural exports did not respond immediately to the lower-valued dollar for several reasons:

1) *The sustained period of dollar appreciation during the early to mid-1980s provided incentives for foreign producers to increase their production in response to favorable exchange rates during that period.*

2) *The dollar did not initially decline in value against the currencies of competing agricultural exporters (e.g., Canada, Australia, Argentina).*

3) *The international debt crisis and depressed oil prices during this period reduced demand for U.S. agricultural exports in many countries throughout the world.*

4) *Restrictive trade policies (e.g., tariffs, subsidies) limited access and improved price competitiveness in European markets.*

However, U.S. agricultural exports and agricultural trade balance eventually increased during the latter stages of the 1980s (Figure 2) Expanding U.S. agricultural exports and a lower-valued U.S. dollar did help to reduce the extremely large overall U.S. trade deficit, but by the end of the decade the U.S. trade deficit still exceeded \$120 billion (Figure 9).

Fiscal Policy Changes

The impact of fiscal policy on U.S. agriculture has most recently centered around the enormous federal budget deficit. During the 1980s, the federal budget deficit averaged more than 4% of GNP, compared to less than 1% of GNP during the 35 years following World War II.

The Reagan administration employed expansionary fiscal policy (via increasing government spending and reducing taxes) to stimulate a slumping economy during the early

1980s. This economic plan was based on the theory that a cut in the tax rate would increase productivity (by increasing both the quantity and quality of labor), which would increase national income and thus increase overall governmental tax revenues -- better known as "supply side" economics. However, governmental expenditures far exceeded governmental tax revenues during this period, resulting in huge budget deficits.

Deficit spending was successful in lifting the U.S. economy out of a severe recession by late 1983. However, the increased demand for money brought on by excessive government spending provided additional upward pressure on interest rates which were being forced higher by the restrictive monetary policy discussed above.

The tight monetary and expansionary fiscal policy mix resulted in real interest rates rising to unprecedented levels of 8 to 10% during this period, compared to historic levels of 2 to 3%. Despite very attractive real interest rates, the U.S. savings rate was not large enough to finance the growing federal budget deficit (Figure 10).

The U.S. was forced to borrow money from various foreign countries (e.g., Japan, Germany). As a result, the U.S. shifted from a net creditor nation to the world's largest debtor nation. This increased the demand for U.S. dollars and thus (coupled with the tight monetary policy discussed above) brought about increases in the value of the dollar relative to other major world currencies. The large federal budget deficit contributed to the trade deficit by escalating U.S. real interest rates and thus the value of the U.S. dollar.

In response to the growing federal budget deficit, Congress passed the Gramm-Rudman-Hollings Deficit Reduction Act in 1985 (later amended in 1987) which forces the government to balance the federal budget by 1993. Since 1985, the budget deficit has narrowed, but still remains above \$160 billion.

The reduction in the federal budget deficit had reduced the government's demand for money, putting less upward pressure on interest rates and aiding the low value of the U.S. dollar. In response to this healthier environment, the U.S. agricultural economy has benefited with higher exports, higher land prices, and lower interest expenses. However, the budget cuts have reduced total outlays for agricultural programs, which represent less than 1% of the total federal budget (Figure 11).

Outlook for the 1990s

Entering the 1990s, the U.S. economy was enjoying its longest peacetime expansion since World War II. The U.S. agricultural sector had almost fully recovered from the devastating recessionary period

of the early to mid-1980s. Prices, exports, land values, and machinery purchases were all trending upward, resulting in record or near-record net cash returns for U.S. farmers and improved agribusiness sales (Figure 12). The level of optimism within the U.S. agricultural industry entering the decade was similar to that at the beginning of the 1980s.

However, following the painful lesson of the early 1980s, farmers and agribusinesses are more aware that drastic macroeconomic policy changes (both at home and abroad) can quickly change the agricultural economic outlook.

Currently, the U.S. is being faced with several internal/external policy issues that will play a major role in determining the future direction of the overall U.S. economy and the agricultural economy. Iraq's invasion of Kuwait sent oil prices escalating. As a result, inflationary pressures are building within the U.S. economy. This comes at a time when the U.S. economy is quite fragile. The real Gross National Product (GNP) increased only 1.7% during the first quarter of 1990 and a slim 0.4% during the second quarter of 1990, the lowest quarterly increase since 1983. Growth increased during the third quarter of 1990, but is still considerably below growth rates experienced in recent years. As a result, many economists are projecting a recession for the U.S. economy in 1991.

Increasing oil prices negatively impact the U.S. agricultural economy. Higher oil prices result in higher fuel, fertilizer, and pesticide prices, which comprise a large portion of many farmers' total cash expenditures. Escalating oil prices will also have dramatic impacts on many other oil importing nations, many of which are also experiencing very slow growth rates. Thus, if this current oil crisis lingers long enough, a worldwide recession may evolve. This would ultimately restrict the recent growth in U.S. agricultural exports and net cash income.

In response to the sluggish U.S. economy, the Bush administration and the business community are calling on the Federal Reserve to ease monetary pressures on the economy by lowering interest rates. Lower interest rates would encourage more business investment and promote growth for the U.S. economy. However, increasing the money supply would also put additional upward pressure on inflation. The Fed is facing a dilemma: Should it decrease the money supply to combat inflation or increase the money supply to ward off a recession?

The large federal budget deficit presents another major problem confronting the U.S. economy. Tax increases and spending cuts necessary to reduce the deficit will retard economic growth and thus increase the likelihood of a recession. The Congress and the President will continue to face political pressure to

reduce the federal budget deficit.

A lower deficit will reduce the demand for money, putting downward pressure on interest rates. As discussed previously, lower interest rates are very beneficial to a capital-intensive, trade-dependent sector like agriculture. Lower interest rates should keep the value of the dollar low, sustaining U.S. growth in international markets. Land prices should also continue to strengthen on the heels of lower interest rates. Lower interest rates will also keep production costs down.

Another likely change in the 1990s for U.S. agriculture is less government intervention. Agriculture will not escape budget cuts. Farmers can expect lower farm program expenditures during this period of budget cuts and worldwide pressure for freer trade. Therefore, the U.S. agricultural economy will have to depend more on returns from the free market, particularly the international market, for growth in the 1990s. The changing international policy environment (see Fact Sheet IV) will play a major role in U.S. agriculture in the 1990s.

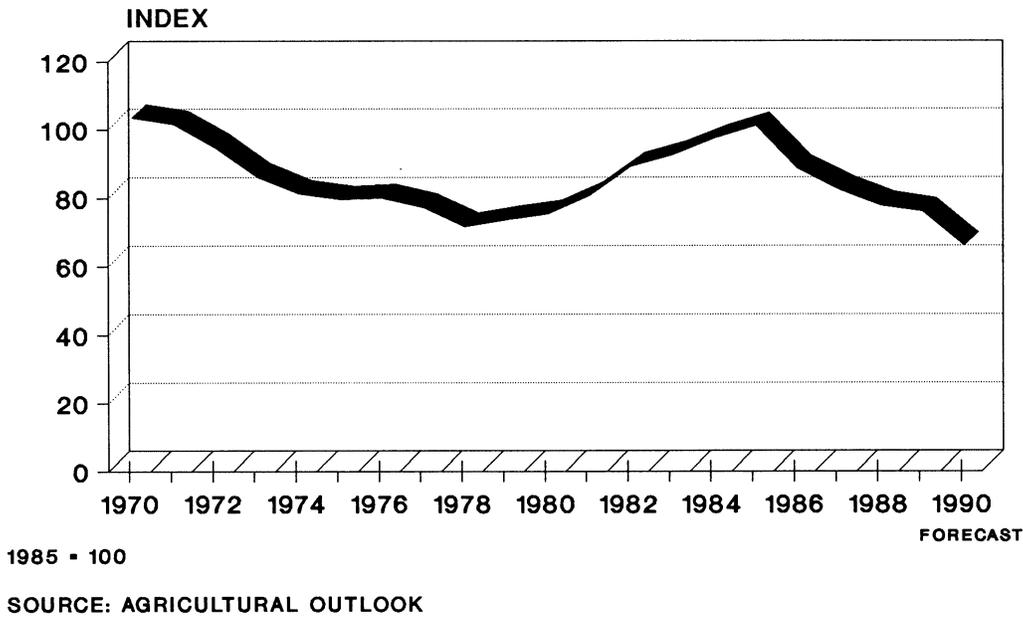
Summary and Conclusions

Macroeconomic policy changes, both domestic and abroad, have played major roles in determining the fate of the U.S. agricultural economy during past decades. The U.S. agricultural economy enjoyed a long period of prosperity during the 1970s, due in large part to an expansionary U.S. monetary policy. However, abrupt changes in U.S. monetary and fiscal policy during the early 1980s sparked a major agricultural recession. The U.S. agricultural economy has recovered in recent years, but the large U.S. federal budget deficit and the crisis in the Persian Gulf threaten to restrict its growth.

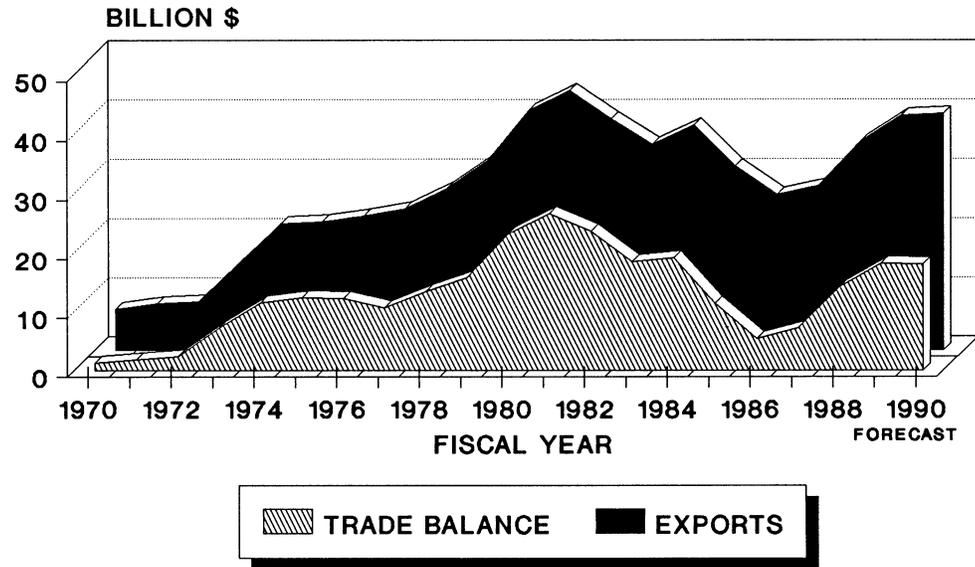
During the 1990s, macroeconomic policy changes will likely have a greater impact on agriculture, given the growing importance of agricultural trade, interdependent economies, and major policy reform worldwide. Recent changes in the Middle East, Eastern Europe, and the Soviet Union serve to illustrate how quickly policy changes/issues in international markets can affect U.S. agriculture.

International monetary policies will play a greater role in determining agricultural trade flows in the 1990s. Furthermore, political pressure will force the executive and legislative branches of the U.S. government to address the federal budget deficit problem. All of these macroeconomic policy changes will affect the U.S. agricultural economy significantly. Thus, it becomes vital that farmers and others in the agricultural industry pay extremely close attention to changing macroeconomic policies in making business decisions.

**FIGURE 1
REAL TRADE-WEIGHTED DOLLAR
EXCHANGE RATE INDEX**

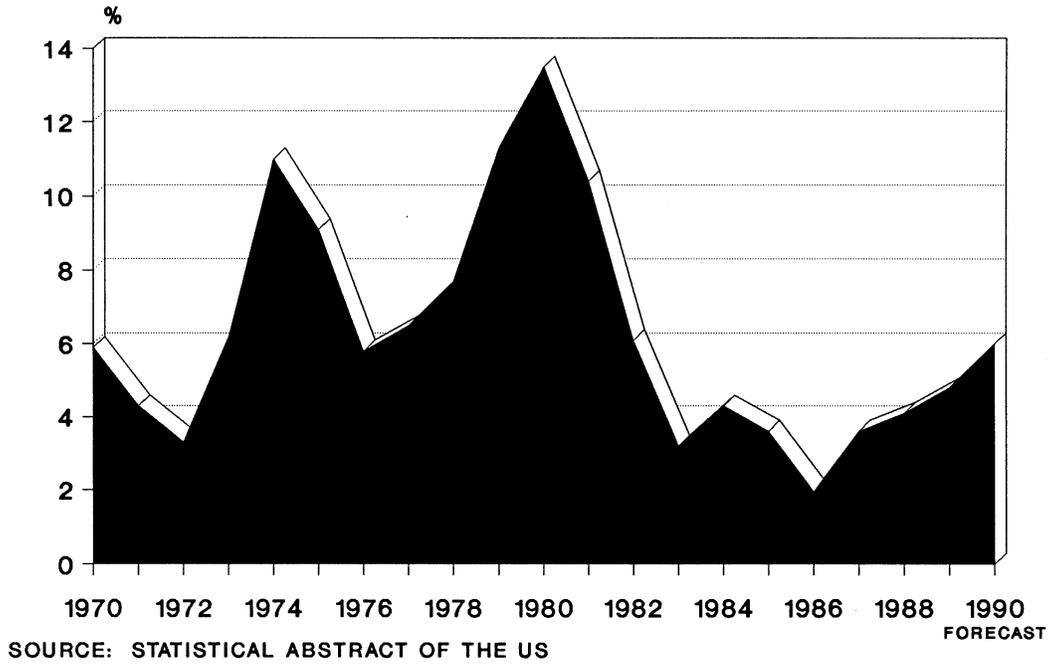


**FIGURE 2
U.S. AGRICULTURAL EXPORTS
AND AGRICULTURAL TRADE BALANCE**

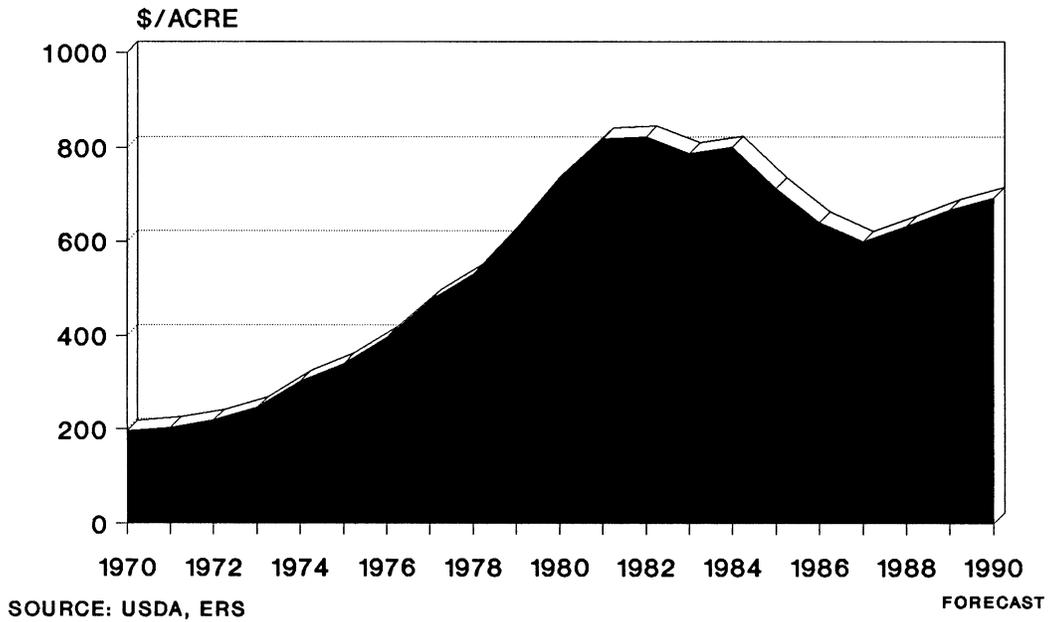


SOURCE: AGRICULTURAL OUTLOOK

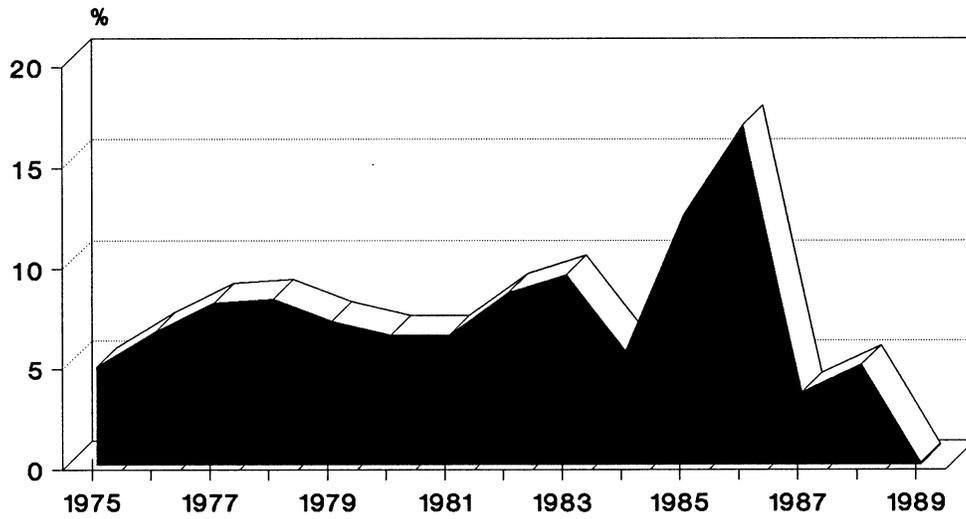
**FIGURE 3
U.S. INFLATION RATE**



**FIGURE 4
AVERAGE PER ACRE VALUE
OF U.S. FARMLAND**

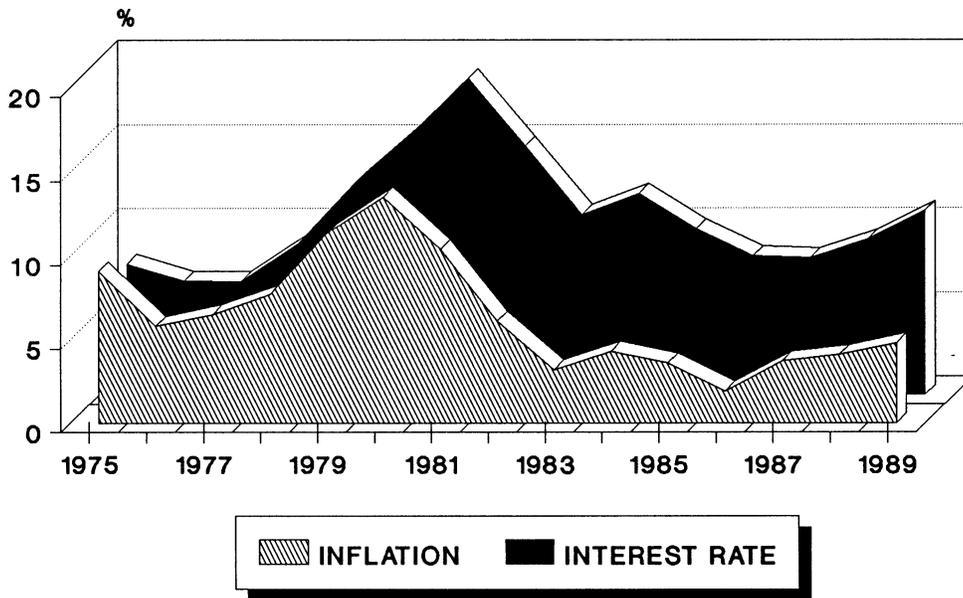


**FIGURE 5
ANNUAL PERCENTAGE CHANGE IN THE
MONEY SUPPLY***



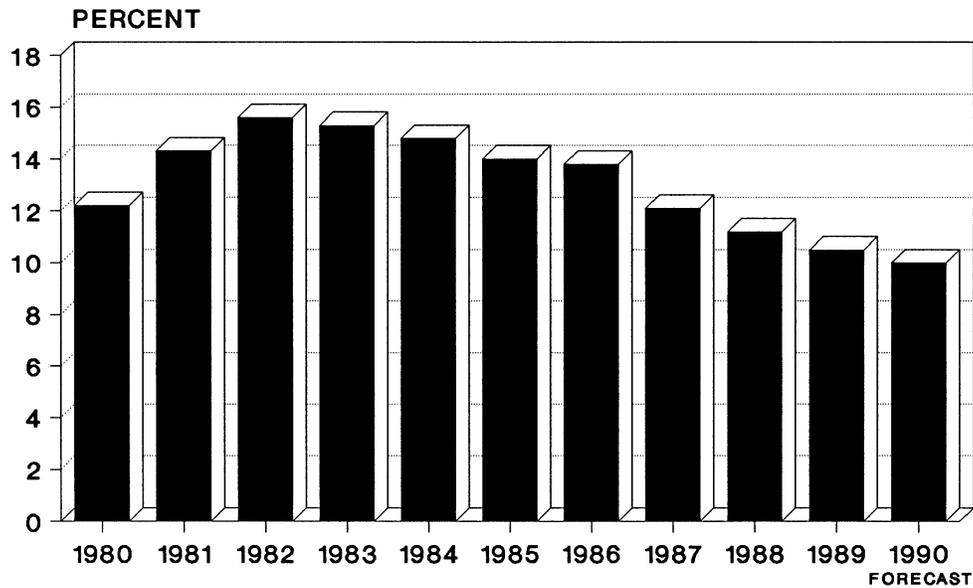
* SEASONALLY ADJUSTED AVERAGE OF DAILY FIGURES FOR M1
SOURCE: STATISTICAL ABSTRACT OF THE US

**FIGURE 6
U.S. PRIME INTEREST RATE
AND INFLATION RATE**



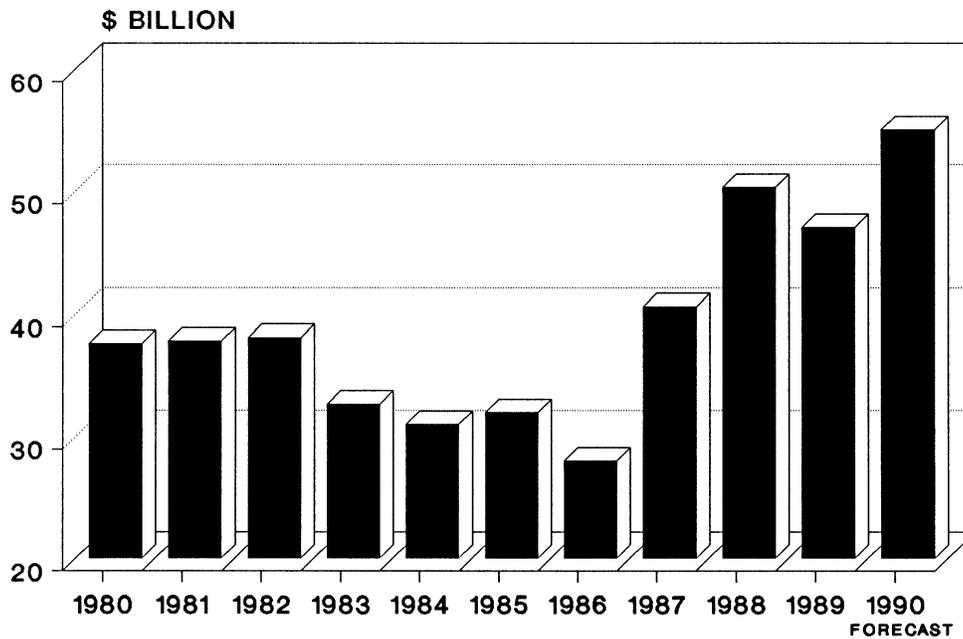
SOURCE: ECONOMIC REPORT OF THE PRESIDENT

FIGURE 7
TOTAL INTEREST COST TO U.S. FARMERS AS
A PERCENTAGE OF TOTAL PRODUCTION COSTS



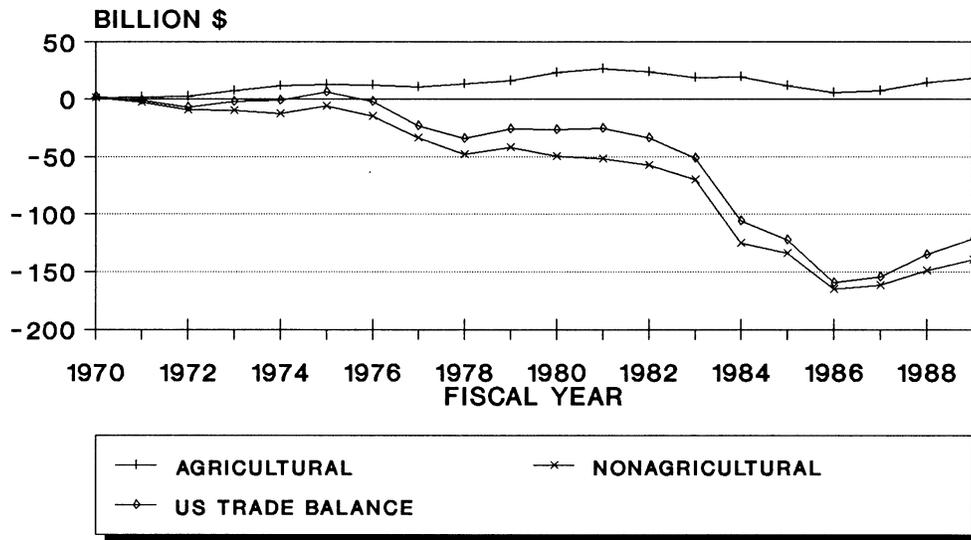
SOURCE: AGRICULTURAL OUTLOOK

FIGURE 8
U.S. FARMERS' NET CASH FLOW



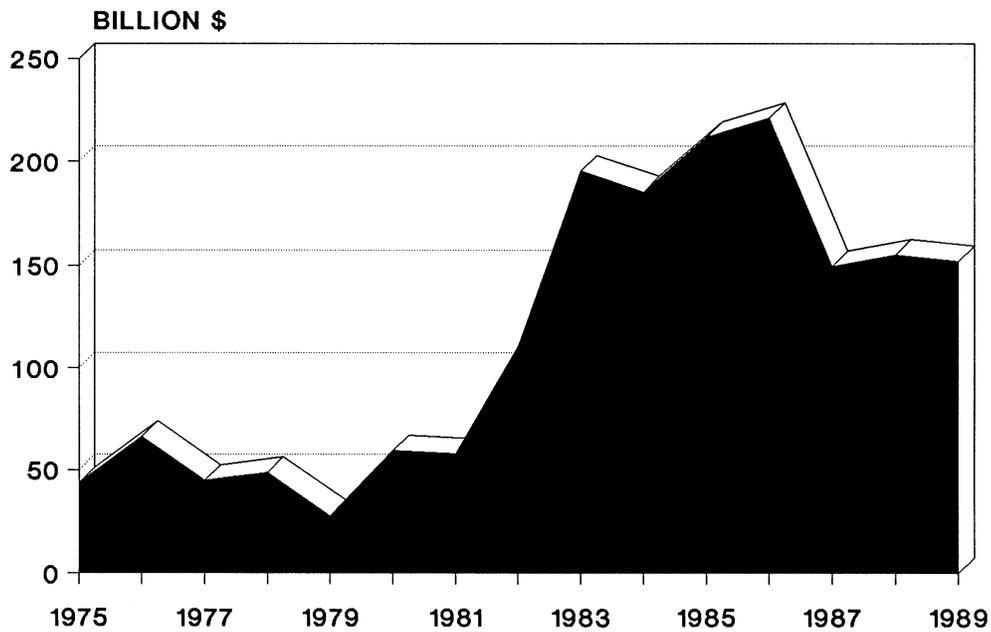
SOURCE: AGRICULTURAL OUTLOOK

**FIGURE 9
U.S. TRADE BALANCE:
AGRICULTURAL VS NONAGRICULTURAL**



SOURCE: AGRICULTURAL OUTLOOK

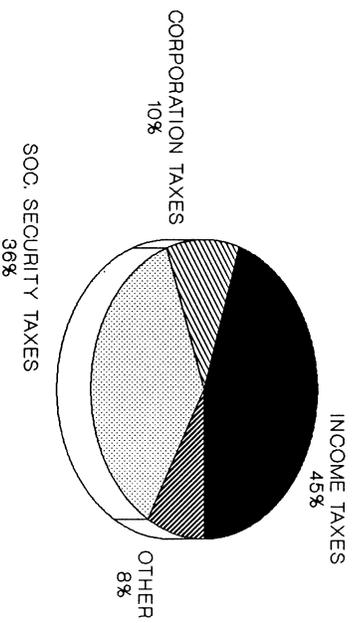
**FIGURE 10
U.S. FEDERAL BUDGET DEFICIT**



SOURCE: FEDERAL RESERVE BULLETIN

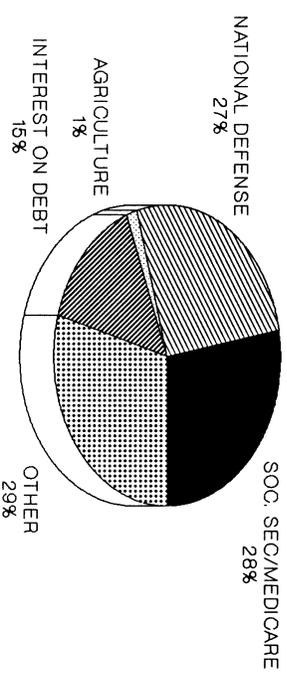
FIGURE 11 DISTRIBUTION OF GOVERNMENT RECEIPTS AND EXPENDITURES

FEDERAL GOVERNMENT RECEIPTS
(FISCAL YEAR 1989)



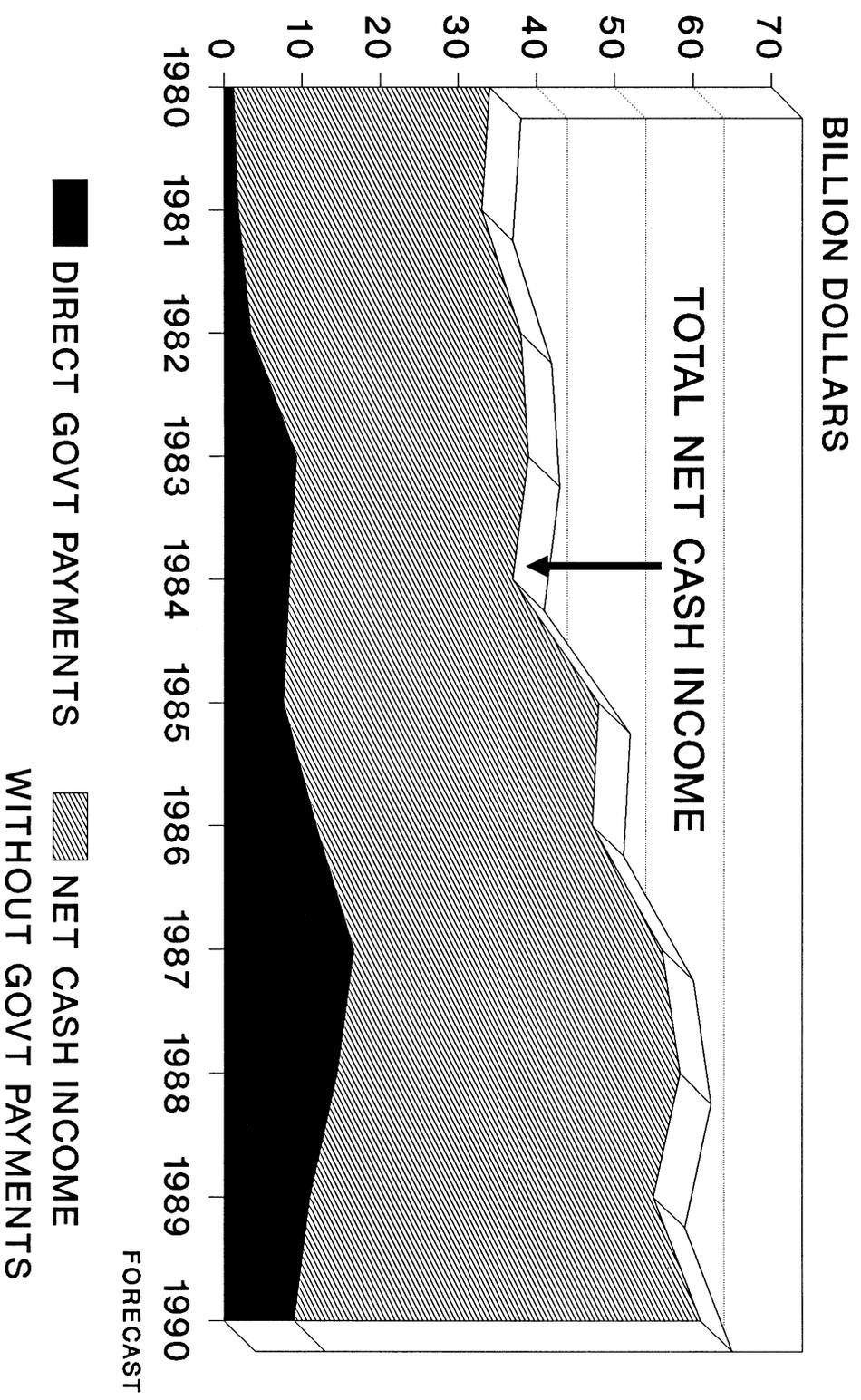
SOURCE: FEDERAL RESERVE BULLETIN

FEDERAL GOVT. EXPENDITURES BY MAJOR
PROGRAM AREA (FISCAL YEAR 1989)



SOURCE: FEDERAL RESERVE BULLETIN

FIGURE 12 U.S. FARMERS' NET CASH INCOME



SOURCE: AGRICULTURAL OUTLOOK

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