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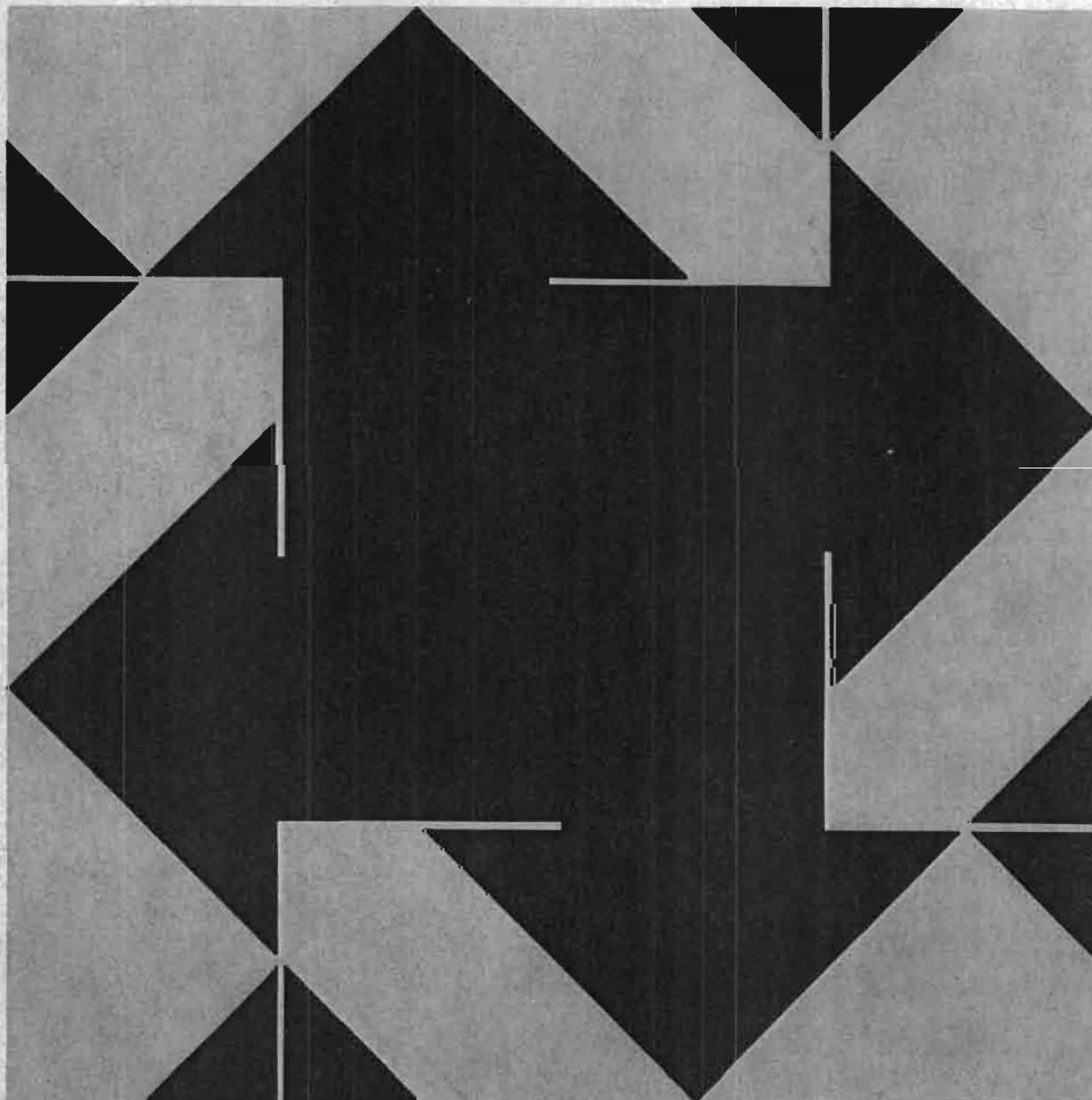
# ENTERING THE 1980s: FISCAL POLICY CHOICES

A Report to the  
Senate and House  
Committees on the Budget  
—Part I

As Required by Public Law 93-344

## NOTICE

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CONGRESS OF THE UNITED STATES



CONGRESSIONAL BUDGET OFFICE

ENTERING THE 1980s: FISCAL POLICY CHOICES

The Congress of the United States  
Congressional Budget Office



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PREFACE

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The Congressional Budget Office is required by Section 202(f) of the Congressional Budget Act of 1974 (Public Law 93-344) to submit an annual report on budgetary options. This year, the report is in two parts: Entering the 1980s: Fiscal Policy Choices and Five-Year Budget Projections: Fiscal Years 1981-1985.

Part I, Entering the 1980s: Fiscal Policy Choices, is one of a series of reports on the state of the economy issued periodically by the Congressional Budget Office. In accordance with CBO's mandate to provide objective analysis, the report contains no recommendations. The report was prepared by George Iden, Joan Schneider, Frank Russek, Stephen Zeller, Lawrence DeMilner, Nariman Behraves, Peter Taylor, Marvin Phaup, Robert Dennis, William Pegram, Antoinette Gibbons, Peter Johnson, Susan Helper, and Carol Timko, under the direction of William J. Beeman and James E. Annable, Jr. Robert L. Faherty and Francis S. Pierce edited the manuscript; Dorothy J. Kornegay, Debra M. Blagburn, Kathleen M. Quinn, and Marsha L. Mottesheard patiently typed the many drafts.

Alice M. Rivlin  
Director

January 1980



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## SUMMARY

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In the past year, the U.S. economy again experienced high inflation and lagging productivity, conditions that characterized much of the decade of the 1970s. Inflation, as measured by the Consumer Price Index (CPI), accelerated to record post-World War II levels, primarily because of a huge jump in the price of imported oil and a rapid increase in housing finance costs. Meanwhile, economic growth decelerated sharply to less than 1 percent during 1979. This slowdown occurred mainly because of reduced spending growth by households in response to the erosion of real income, the gasoline shortage, and tighter credit conditions. To complete the picture of stagflation, available economic data suggest that output per worker hour--the principal source of rising living standards--actually declined during 1979.

Economic growth followed an uneven path, with a decline in total output during the first half of 1979 followed by a moderate rebound in the second half of the year. Despite the second-half upturn, there were indications at year-end that the economy was again weakening significantly. The consensus view among economic forecasters is for high inflation, weak productivity gains, and rising unemployment during the next year or two. Nevertheless, the economic outlook remains highly uncertain. Nearly all forecasters greatly underestimated inflation in 1979. Although economic activity was weak in 1979, the slowdown was not as pronounced as most analysts expected, and the rise in the unemployment rate was surprisingly small.

### THE CBO FORECAST

While most forecasts show a decline in economic activity during 1980, there is a fairly wide range of views about the size and duration of the decline. To a considerable degree, these differences reflect divergent assumptions about the future course of fiscal and monetary policy. The economic projection prepared by the Congressional Budget Office (CBO) to assist the Congress in its deliberation of the first budget resolution for fiscal year 1981 is based on the following policy assumptions:

- o Federal spending and tax policies for fiscal years 1980 and 1981 will continue to be those now specified in current

law. Federal outlays are estimated to total \$560 billion in fiscal year 1980 and \$609 billion in fiscal year 1981. No tax cuts are assumed; the previously legislated increases in Social Security taxes scheduled for 1981 are assumed to take place.

- o Monetary authorities are assumed to pursue restrictive policies, with money aggregate growth over the projection period near the midpoint of the Federal Reserve's announced target range. The Federal Reserve is expected to permit only a small decline in short-term interest rates during the next six months.

Given these policy assumptions, the CBO forecast, shown in Summary Table 1, is as follows:

- o Gross National Product in 1972 dollars (real GNP) is projected to range from about no growth to more than a 2 percent decline from the fourth quarter of 1979 to the fourth quarter of 1980. During 1981, growth in real GNP is expected to recover moderately, rising between 2 and 4 percent.
- o The surge in the CPI is expected to moderate somewhat from the current rate, to a range of 8.6 to 10.6 percent from the fourth quarter of 1979 to the fourth quarter of 1980, and a range of 8.3 to 10.3 percent during 1981.
- o The unemployment rate is projected to rise from the current level to a 7.2 to 8.2 percent range by the end of 1980 and to hold at high rates throughout 1981.

CBO is forecasting a peak-to-trough drop in real GNP of about 2 percent, somewhat smaller than in the average postwar recession. <sup>1/</sup> The decline is concentrated largely in the first half of 1980. The projected recovery begins during the second half of 1980 and is quite weak by historical standards.

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<sup>1/</sup> The average peak-to-trough decline in post-World War II recessions has been about 2.3 percent.

SUMMARY TABLE 1. CBO ECONOMIC PROJECTIONS BASED ON CURRENT LAW

| Economic Variable                          | 1978:4<br>to 1979:4<br>(actual) | 1979:4<br>to 1980:4 | 1980:4<br>to 1981:4 |
|--|---------------------------------|---------------------|---------------------|
| Nominal GNP (percent change)               | 9.9                             | 5.7 to 9.8          | 10.2 to 14.4        |
| Real GNP (1972 dollars, percent change)    | 0.8                             | -2.3 to -0.3        | 2.0 to 4.0          |
| Consumer Price Index (percent change)      | 12.6                            | 8.6 to 10.6         | 8.3 to 10.3         |
| Unemployment Rate, End of Period (percent) | 5.9                             | 7.2 to 8.2          | 7.5 to 8.5          |

#### Reasons for the Downturn and Weak Recovery

Economic growth slowed sharply in 1979, registering only an 0.8 percent increase during the year ending in the fourth quarter of 1979. This compares with 4.8 percent growth during the previous year. The growth that did occur during 1979 was unevenly spread among sectors. Household spending on personal consumption goods and housing was especially depressed, while exports showed relative strength. Industrial production was flat during the year.

The fundamental causes of the 1979 slowdown were increased OPEC oil prices, record high interest rates, and generally high inflation; these continued to depress real income growth and consumer demands as the year came to a close. The dramatic tightening of monetary policy last October--in response to high inflation, a weak dollar, and a resurgence of rapid money supply growth--has not been in place long enough to have had a major effect on real economic activity. Most analysts believe that this more restrictive monetary policy will have a very depressing effect on residential construction this spring. This view is

consistent with the recent weakening in house sales and the drop in housing starts toward the end of the year, which will affect residential construction activity over the next few quarters.

Another sector that experienced weak sales toward the end of 1979 is automobiles. As a result, the domestic auto industry has announced further cutbacks in car assemblies for the first quarter of this year, and most observers do not expect a significant recovery in auto output until next summer or later. Housing and autos account for a significant portion of total domestic output. When secondary effects on suppliers and producers of related products are taken into account, the overall impact on the economy is expected to be quite large.

Retail sales other than autos are also projected to be weak in 1980, because of lagging real income growth. Saving as a share of personal disposable income has declined to record low rates during recent months, suggesting that households have been attempting to maintain customary living standards despite the weakness in real income. Further reductions in saving rates are not likely to be a source of increased real consumer spending during the forecast period. Rather, CBO--along with most other forecasters--is projecting a small increase in the saving rate by the end of 1981.

The projected weakness in household demand is expected to be offset, in part, by the behavior of other sectors, helping to limit the decline in economic activity in 1980. First, most indicators of future business spending suggest that the investment sector will not be as weak in 1980 as in most past recessions--in part, because some industries have large backlogs of orders. Second, net exports are projected to be a source of growth during the next few years; a weaker domestic economy will demand fewer imports, while less deceleration in foreign economic growth is expected to bolster the demand for U.S. exports. Finally, and most important, available data indicate that business firms have kept inventories at relatively low levels, thereby reducing the likelihood of a severe curtailment of production to trim unwanted inventories.

Assuming that budget policies continue as under current law, CBO's forecast for 1981 indicates a less robust recovery than the typical postwar upswing. The major reasons, aside from the shallowness of the recession, are threefold: First, high inflation

is expected to continue to sap the purchasing power of rising money incomes. Second, high inflation and the international condition of the dollar are expected to place upward pressure on short-term interest rates. Third, a sizable braking effect on the economy will come from the Social Security tax increases scheduled for next year as well as from the combination of inflation and the progressive income tax structure, which pushes taxpayers into higher tax brackets.

### POLICY OPTIONS

CBO's current law budget estimates, shown in Summary Table 2, indicate that spending growth will accelerate and the deficit increase in fiscal year 1980, partly because of the projected

SUMMARY TABLE 2. ACTUAL AND PROJECTED FEDERAL BUDGET TOTALS, FISCAL YEARS 1978-1981 (Billions of dollars, Unified Budget basis)

|                     |        |        | 1980                 |                         | 1981                              |
|---------------------|--------|--------|----------------------|-------------------------|-----------------------------------|
|                     | 1978   | 1979   | 2nd                  | CBO                     | CBO                               |
|                     | Actual | Actual | Budget<br>Resolution | Current Law<br>Estimate | Current Law<br>Estimate <u>a/</u> |
| Receipts            | 402.0  | 465.9  | 517.8 <u>b/</u>      | 516                     | 582 <u>c/</u>                     |
| Outlays             | 450.8  | 493.7  | 547.6                | 560                     | 609                               |
| (Percent<br>Change) | (11.9) | (9.5)  | (10.9)               | (13.4)                  | (8.8)                             |
| Budget<br>Balance   | -48.8  | -27.7  | -29.8                | -44                     | -27                               |

a/ CBO's current law projection plus an assumed 7 percent federal pay raise in October 1980.

b/ Includes \$2.4 billion for a windfall profits tax. When this report was prepared, that tax had not been enacted and was not included in CBO's current law estimates.

c/ Does not include Administration cash management proposals.

recession; both are then expected to decline again as the economy recovers in fiscal year 1981. Given the budget outlook under current law and the pessimistic outlook for inflation, employment, and productivity, what budget policies are appropriate to deal with the situation?

During most of the postwar period, fiscal policy emphasized tax cuts and spending increases to prop up sagging demand during recession and, conversely, tax increases and spending cuts to curtail demand during boom periods. But such demand-management policies may not be reliable tools for stimulating long-run growth. In fact, some have argued that these short-term policies have sometimes hindered growth once full employment was restored by diverting resources away from investment to consumption.

Demand-management policies have been particularly ineffective in dealing with inflation and recession in the 1970s, largely because the poor performance of the economy did not arise primarily from fluctuations in demand. A unique characteristic of the past decade has been severe supply problems, especially the OPEC price increases, that have led to simultaneously high inflation and high unemployment. Income tax cuts can offset the impact on employment but cannot deal simultaneously with rapid inflation.

For fiscal year 1981, a number of fiscal policy strategies have been suggested:

- o Pursue an anti-inflationary budget policy of reducing total demand: (1) by holding spending at levels applicable under current law and forgoing tax cuts; or (2) by adopting a more restrictive balanced-budget policy that would cut spending well below current levels.
- o Prepare tax cuts or other short-run stimulative measures: (1) to offset automatic increases in effective tax rates due to inflation; or (2) to achieve a short-term economic stimulus should the unemployment rate rise to unacceptable levels.
- o Adopt changes in the tax structure that would encourage business investment over the long run in order to achieve an improvement in labor productivity and enhance the future growth in living standards.
- o Combine short-run fiscal measures designed to improve price stability (or to maintain high employment) with changes in

the business tax structure to achieve increased growth in productivity.

The policy choices are difficult because each strategy has different benefits and costs. For example, under the first option, fiscal policy would be used to restrict the growth of total spending in the economy, particularly in 1981, with the resulting economic slack mitigating the momentum of inflation. Thus, such a restrictive policy, while helping to slow inflation, would have a depressing effect on output and employment. 2/

Under the second strategy, fiscal stimulus would help to offset rising unemployment but might exacerbate inflation and slow productivity growth. 3/ Conversely, sole reliance on the longer-run third strategy would do little to solve the immediate problems of high inflation and rising unemployment. Moreover, the longer-run strategy might not be sufficient by itself to improve productivity significantly. Two conditions appear to be required to achieve rapid growth in investment: high rates of capacity utilization, and a return on investment sufficient to divert resources away from consumption to investment goods. The latter requirement involves choosing to increase saving at the expense of consumption in the short run; it may also require the diversion of personal saving from housebuilding to productivity-enhancing investment.

A combination of long- and short-run fiscal measures, as in the last option, may be required in order to work toward more than one goal at a time. For example, the combination of personal income tax cuts and business tax cuts would simultaneously promote

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2/ One measure of the effect of fiscal policy on the economy, the full-employment budget, which adjusts for cyclical changes in output, shows a sharply restrictive swing toward surplus in fiscal year 1981. This results from the reduced growth in spending on a current law basis and, with tax cuts forgone, from increased tax burdens arising from inflation and higher payroll taxes.

3/ Added inflation could lower the return on capital or divert resources from investment goods to consumption goods. On the other hand, many analysts have argued that demand-management policies that keep the economy working at high levels would encourage high rates of capital formation.

short-run gains in employment and long-run increases in productivity growth. But policies large enough to achieve substantial improvement in both objectives would involve a large revenue loss and thereby conflict with the goal of balancing the budget. Moreover, in practice, increased emphasis on long-run growth or on reducing inflation may involve some sacrifice of employment in the short run.

Uncertainty. Even though there is widespread agreement among economic forecasters that inflation will be very high and that the unemployment rate will rise in 1980, the outlook is by no means certain. Many events with important implications for prices and output lie outside the range of economic forecasting. Assumptions about energy and food prices depend upon such unpredictable events as weather conditions and political events throughout the world. Even decisions that are subject to government control--in areas such as monetary policy, energy legislation, and the response of U.S. military outlays to the recent events in Iran and Afghanistan--cannot be predicted with a high degree of confidence.

A major reason for uncertainty in any current forecast is that the behavior of consumers and businesses has proved difficult to predict in times of high inflation. For example, the CBO forecast assumes that saving rates rise gradually but remain at low levels over the next two years. A change in consumer attitudes that led to sharply increased saving would have a strong impact on the short-run economic outlook, likely producing slower economic growth than forecast. Conversely, if consumers expect inflation to accelerate, they may increase their current spending by drawing down savings, thus postponing the expected recession.

Perhaps the best way to deal with such uncertainty about the short-run economic outlook is to prepare contingency plans so that quick fiscal action can be taken if needed.

Timing. Fiscal policy measures may not operate quickly enough to solve immediate economic problems. For example, stimulative tax cuts undertaken during the spring months would not be likely to have a significant effect on private demands or inflation until the last half of 1980. Thus, if forecasts of an economic downturn during the first half of 1980 are correct, a tax cut would not prevent the projected decline, although it would strengthen the recovery. Other fiscal policy responses, such as increased spending on public works, would have a much greater lag between enactment and impact on the economy.

## Illustrative Fiscal Policy Options

Stimulative fiscal policy measures that have received attention during the past year include: personal income tax cuts, at least large enough to offset rising tax rates due to inflation; reductions in payroll taxes; accelerated depreciation for business capital; and increased defense purchases. At the same time, there are proposals for a more restrictive fiscal policy, particularly spending cuts, to reduce inflation. Advocates of the payroll tax cuts argue that, unlike income tax cuts which can generate both increased demand and increased prices, reduced payroll taxes can stimulate demand and at the same time diminish inflationary pressures. This is because reductions in the business component of the payroll tax are thought to be largely passed forward to consumers. Advocates of accelerated depreciation point to the need for an investment stimulus to improve productivity growth. They note that current depreciation rules are not adequate to provide for the recovery of replacement costs in an inflationary environment.

Summary Table 3 compares CBO estimates of the short-run economic effects of four illustrative fiscal packages. The first two are \$20 billion stimulus packages: a \$15 billion cut in personal income taxes, combined with a \$5 billion increase in spending; and a \$15 billion cut in payroll taxes, combined with accelerated depreciation involving an average annual \$5 billion revenue loss over the first three years. The range of uncertainty in such calculations is considerable; nevertheless, it is quite likely that both policies have a sizable effect on real output and employment. According to CBO estimates, the real effects of the second option are initially smaller than those of the first option, but the effect on real GNP is larger by the eighth quarter when the major impact of accelerated depreciation takes hold. A significant difference is that the first option has an adverse impact on inflation, and the second does not. Although it is much more difficult to estimate long-run effects, the combination of accelerated depreciation and payroll tax cuts would result in a somewhat larger increase in investment and thereby contribute more to productivity growth.

The third option shown involves a \$10 billion cut in spending and a corresponding cut in personal income taxes. This option reduces the size of the government sector, with very little short-term effect on the the level of economic activity. The final option involves a \$20 billion across-the-board reduction in

SUMMARY TABLE 3. ESTIMATED EFFECTS OF FOUR FISCAL POLICY PACKAGES AFTER EIGHT QUARTERS

| Fiscal Packages  | GNP<br>(billions of<br>current dollars) | Real GNP<br>(billions of<br>1972 dollars) | Unemployment<br>Rate (percent-<br>age points) | Employment<br>(thousands) | Consumer Price<br>Index (percent-<br>age points) |
|--|---|---|---|---------------------------|--|
| \$15 Billion Personal<br>Income Tax Cut and<br>\$5 Billion Increase<br>in Spending <u>a/</u> | 26                                      | 11  | -0.3  | 425                       | 0.1  |
| \$15 Billion Payroll<br>Tax Cut and \$5<br>Billion Accelerated<br>Depreciation               | 19                                      | 13  | -0.3  | 400                       | -0.2   |
| \$10 Billion Personal<br>Income Tax Cut and<br>\$10 Billion Cut in<br>Spending <u>b/</u>     | -1                                      | 0 <u>c/</u>                               | 0 <u>d/</u>                                   | -25                       | 0  |
| \$20 Billion Spending<br>Cut <u>e/</u>   | -28                                     | -12                                       | 0.3   | -475                      | -0.1   |

a/ The composition of the spending increase is assumed to be \$2.5 billion for defense purchases and \$2.5 billion for transfers.

b/ Spending cuts are assumed to be \$4 billion in transfer payments, \$4 billion in grants to state and local governments, and \$2 billion in nondefense purchases.

c/ Negative, less than 0.1 percent.

d/ Positive, less than 0.1 percent.

e/ Spending cuts are assumed to be across all budget categories.

spending beginning in the first quarter of fiscal year 1981. (As a practical matter, it might be difficult to achieve a "step reduction" in spending of this magnitude by the beginning of the year.) This option would have a rather immediate negative impact on real GNP and employment. While these negative effects would likely decline after the second year, the CBO simulation shows that the beneficial effect on inflation would continue to increase for sometime thereafter.



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## CHAPTER I. INTRODUCTION

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This report assesses the current state of the economy, the outlook for the next two years, and the fiscal policy actions available to the Congress. The slowdown in economic growth last year is expected to culminate in a mild recession in 1980, followed by a relatively weak recovery late this year and in 1981. Throughout the period, inflation will likely remain high and productivity growth slow. In such circumstances, the short-term policy choices are extremely difficult. The current economic problems cannot be solved quickly and easily. Long-term policies that get to the roots of the problems are needed.

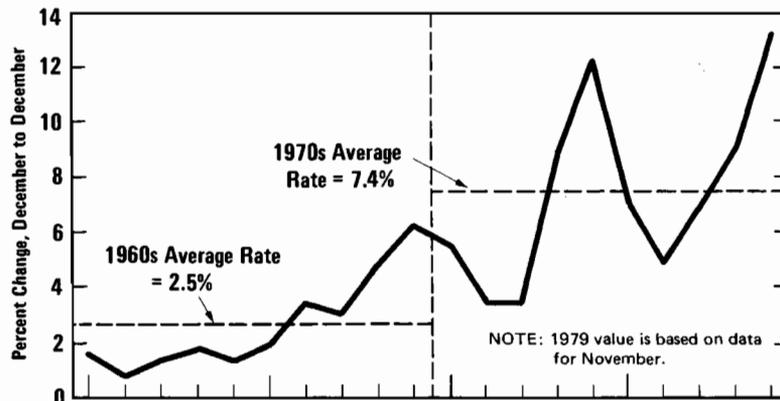
The prospects for 1980 and 1981 are a continuation of a trend. Economic performance in the United States deteriorated markedly in the decade of the 1970s. As shown in Figure 1, inflation and unemployment were both significantly higher than in the 1960s, while productivity growth--the principal source of rising living standards--lagged well below the earlier period.

Among the most important reasons for the poor showing over the past 10 years is that world merchandise trade conditions shifted sharply against the United States, putting downward pressure on the international value of the dollar and limiting the ability of fiscal and monetary policymakers to achieve high employment. The Organization of Petroleum Exporting Countries (OPEC) brought about a dramatic jump in world oil prices, up from \$2 a barrel at the beginning of the decade to \$24 to \$30 or more at the start of 1980. In addition, international competition in manufactured goods became intense, as shown by the inroads in domestic markets made by foreign producers of autos and steel. Another factor causing the apparent deterioration of economic performance was the postwar baby boom, which brought a large number of inexperienced workers into the labor force in the 1970s, raising the overall unemployment rate and slowing productivity growth. Moreover, the rise in constant-dollar investment in plant and equipment was only 2-1/2 percent at an annual rate in the past 10 years,

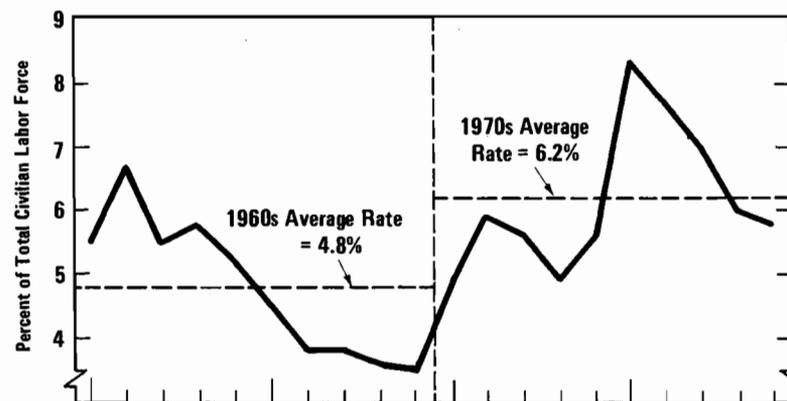
Figure 1.

### Measures of Economic Performance, 1960-1979

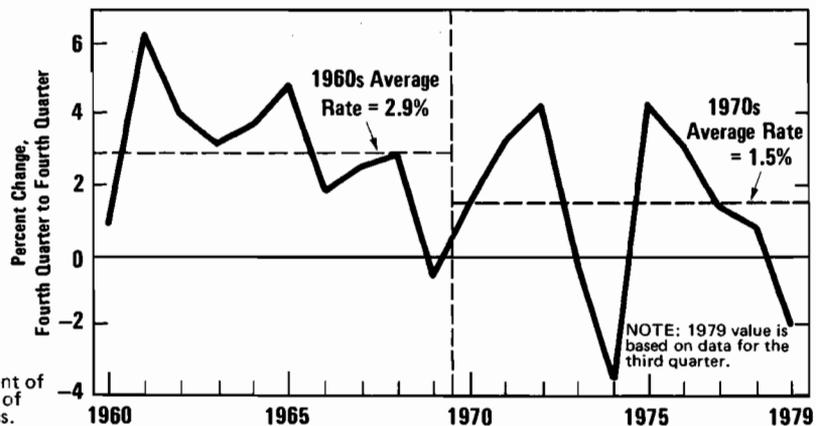
Consumer Prices



Unemployment Rate



Output Per Hour  
(In the Private Business Sector)



SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

well below the 7 percent rate of the 1960s. <sup>1/</sup> Also, during the past decade, more investment was channeled to antipollution efforts and the protection of health and safety.

What can government policy do about these unfavorable economic trends? Clearly, little can be done about factors such as demographic change. As the baby boom ages, its adverse effects on unemployment and productivity will tend to reverse themselves. Other factors, however, such as the international competitive position of the United States, the rate of productive investment, and the gap between actual output and output at full capacity, are sensitive to policy decisions. These decisions will be the focus of Chapter V.

In that chapter, economic policies will be divided into three nonexclusive groups:

- o Those influencing total spending in the economy,
- o Those influencing the growth of total productive capacity in the economy, and
- o Those influencing the import of oil and, therefore, the balance of international trade.

Policies that influence total spending feature the standard macroeconomic tools--fiscal and monetary policies--and are usually the focus of economic policy debates.

Policies that influence the growth of productive capacity tend to be longer-term in nature, often influencing the distribution of

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<sup>1/</sup> There is substantial controversy about how much of the productivity slowdown is attributable to the deceleration in plant and equipment growth. One recent study concluded that "the 1973-1978 [productivity] slowdown is largely accounted for by the relative weakness in capital formation." J.R. Norsworthy, M.J. Harper, and K. Kunze, "The Slowdown in Productivity Growth," Brookings Papers on Economic Activity (1972:2), p. 415. For a lower estimate of the role of investment, see E.F. Denison, "Effects of Selected Changes in the Institutional and Human Environment upon Output per Unit of Input," Survey of Current Business (January 1978).

resources between consumption and investment. 2/ Most significant here are the tax, spending, and regulatory programs that affect the ability and incentives to save, invest, and produce efficiently. Budget balance and money growth also play an important role in the expansion of productive capacity over time, but they are not the whole story.

Policies influencing international trade also tend to be longer-term. Of particular importance at present are those that attempt to deal with the huge increase in U.S. payments for imported oil. Proposals here center on energy conservation, increased domestic production, and development of alternative energy sources.

U.S. economic policymaking has paid relatively little attention to the longer-term choices. This inattention may help explain why short-term policy options have become progressively worse. Over the past decade, as the country has moved from one business cycle to the next, policymakers have accepted higher rates of unemployment and inflation. It is time to recognize that the short-term tools available to the budgetary and monetary authorities are not sufficient to bring about high employment and low inflation in the absence of longer-term policies that will address the country's worsened international trade position and lagging productivity growth. In short, an improvement in short-term policy options requires an improvement in the U.S. trade balance and in the rate of productivity advance in the U.S. economy.

Accordingly, the chapters that follow do not focus solely on short-term policy options affecting total spending. Attention is also given to longer-term policy choices that may affect the growth of total productive capacity in the United States and reduce the

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2/ Other policy-related factors that may affect economic growth include the disincentive to work resulting from high marginal income tax rates and market inefficiencies. At current income tax rates, there is little evidence that the net discouragement effect is large. See the Congressional Budget Office, An Analysis of the Roth-Kemp Tax Cut Proposal (October 1978), Chapter II. But some transfer programs may reduce work effort. Moreover, market inefficiencies rooted in government regulations or in the exercise of private market power may be a significant drag on the growth of productive capacity.

country's dependence on high-priced foreign oil. Chapter II reviews the current state of the economy. The third chapter describes recent monetary and fiscal policies. Chapter IV presents the CBO forecast of economic activity through 1981. Chapter V outlines a number of fiscal policy options for fiscal year 1981 and assesses the short-term and longer-term effects of each. Finally, an Appendix describes how the Consumer Price Index (CPI) may have overestimated the recent acceleration of inflation.



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## CHAPTER II. CURRENT ECONOMIC TRENDS

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The economy in 1979 displayed many of the characteristics it had shown in the decade as a whole: high inflation, lagging productivity, and an unfavorable international balance of merchandise trade. Of the three, rapidly rising prices probably influenced events most in 1979. The further acceleration of inflation continued to distort consumption patterns and depress personal saving, to fuel speculation in nonproductive investment, and to encourage moves by economic policymakers to restrict the growth of total spending.

### PRICES AND COSTS

The Consumer Price Index (CPI) increased about 13 percent in 1979, the most rapid rate of the postwar period. The pace of inflation was very uneven across the categories of the CPI (Figure 2). Energy prices jumped dramatically. Sharp increases were recorded in home purchase and financing costs, food, and medical care. More moderate rises occurred in apparel, household furnishings, entertainment, and transportation (excluding gasoline).

### Energy Prices

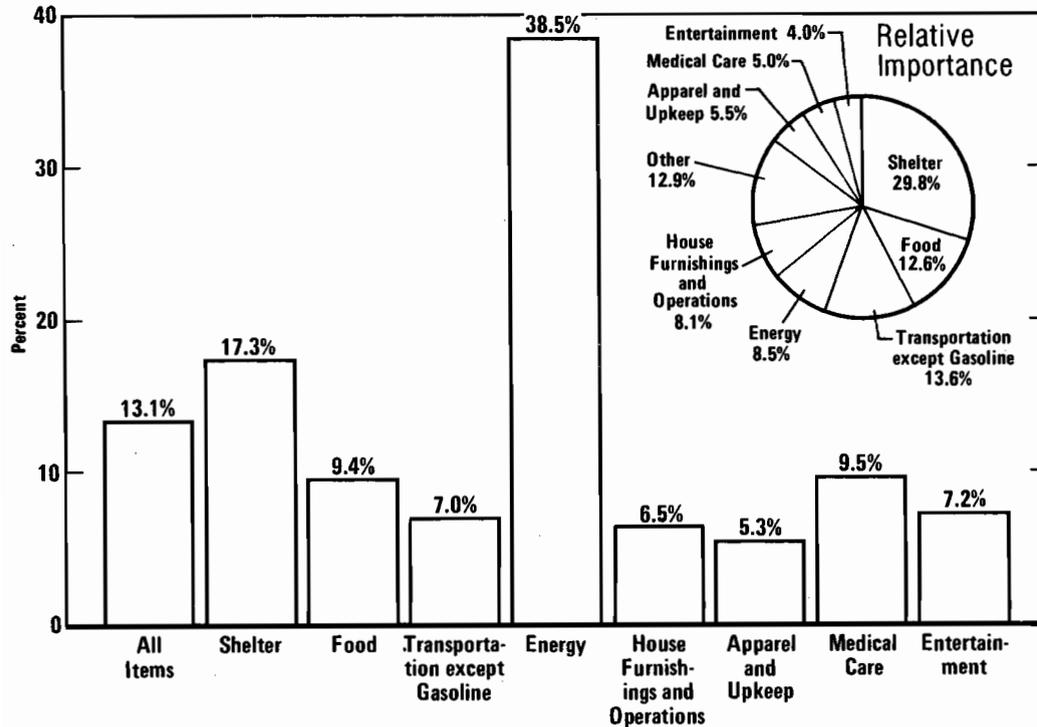
In December 1978, the Organization of Petroleum Exporting Countries (OPEC) scheduled a 14-1/2 percent increase in the price of oil for 1979. But events intervened. Turmoil in Iran and the tightening of world oil supplies drove prices up at an extraordinary rate in 1979. By year-end, prices had jumped 120 percent for imported oil and 65 percent for domestically produced petroleum. The 1979 OPEC price increases are estimated to have directly added more than 2-1/2 percentage points to the overall rate of inflation. 1/

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1/ The direct effect of higher prices for imported oil added 2.3 percentage points to the overall rate. In addition, since domestic oil price increases permitted under decontrol are linked to the world price, the OPEC increase added another 0.3 percentage point to the overall rate in 1979 as a result of more expensive domestic output.

Figure 2.

Consumer Price Increases by Category, 1979



SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

NOTES: Shown are the percent increases from December 1978 through November 1979, expressed at annual rates. Except for the Energy category, data are seasonally adjusted.

At the retail level, the price of gasoline increased at an annual rate of 53 percent during the first 11 months of 1979; the price of heating oil rose at a rate of 67 percent. These increases were significantly higher than would have resulted from a simple passthrough of the higher cost of crude oil. Based on data through August, only about two-thirds of the retail price surge can be attributed to higher petroleum costs to refiners. For gasoline, increased profit margins for both refining and retailing accounted roughly for the remaining third. For heating oil, the story is a bit more complex. Higher retail margins accounted for little of the price increase. Higher refiners' margins caused more than one-tenth of the price rise, while an increase in the proportion of higher-priced imported heating oil accounted for about one-sixth of the overall increase. The remainder of the increase resulted from higher-priced crude oil.

The rapid rise of oil prices and increased U.S. dependence on imported petroleum last year continued trends that had characterized much of the past decade (Figure 3). World oil prices surged by more than 30 percent a year in the 1970s, after declining slightly throughout the 1960s. Meanwhile, imported petroleum increased from less than one-fifth of total U.S. consumption in 1960 to more than two-fifths in 1979. Consequently, the United States now spends over 4 percent of its national income on foreign oil--approximately \$90 billion projected in 1980--compared to 0.3 percent 20 years ago. These are huge magnitudes. It is not surprising, then, that petroleum--its price and availability--has moved to the center stage of economic policymaking.

### Housing Costs

Next to energy, the sharpest upward pressure on the CPI came from the rising cost of shelter, up about 17 percent in 1979 (Table 1). This dramatic increase, however, must be interpreted with caution. Some of the price surge in this sector apparently results from measurement problems--an issue that is analyzed in the Appendix.

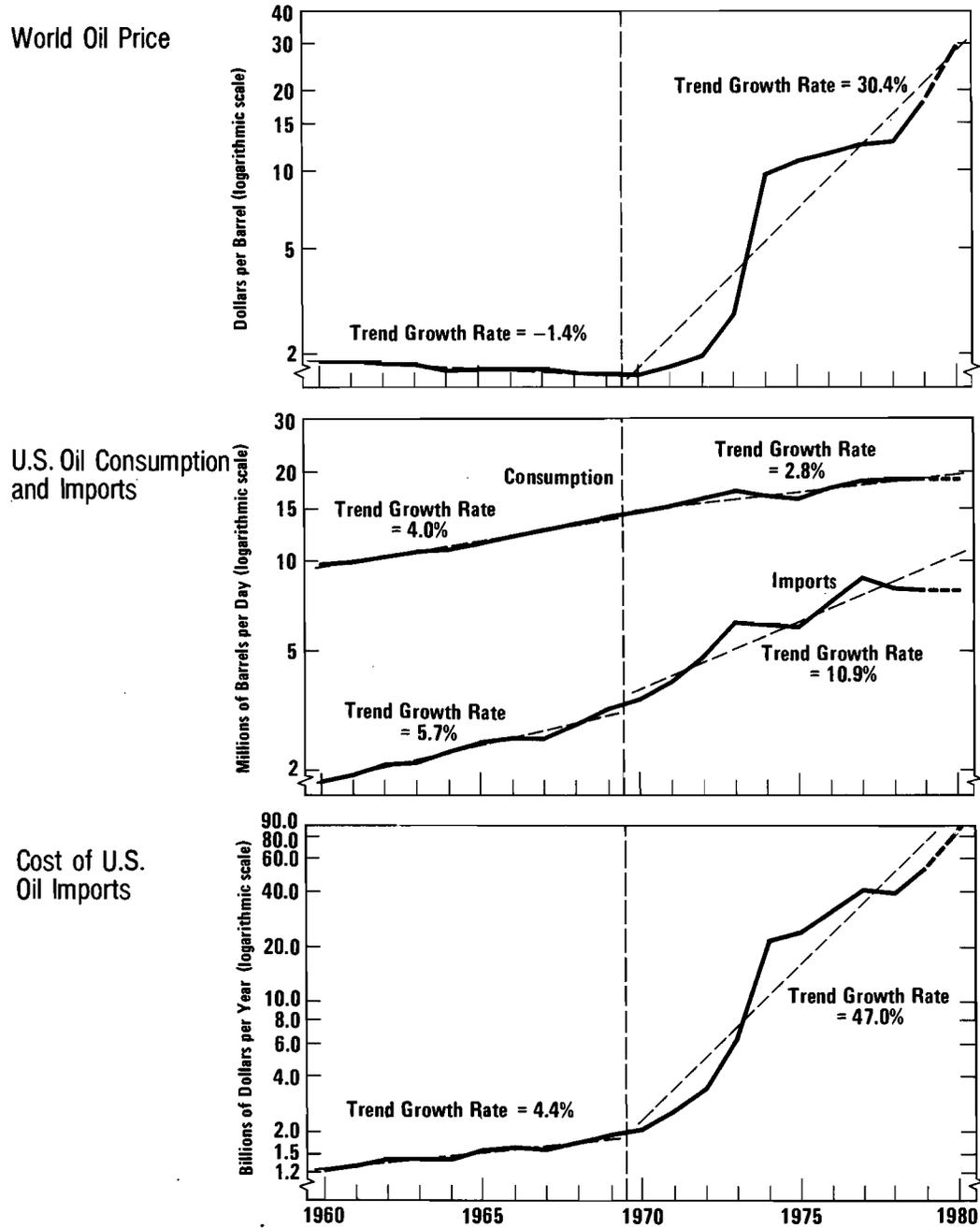
TABLE 1. RATE OF CHANGE OF CPI SHELTER PRICES (Percent change at annual rates, seasonally adjusted)

|                                   | December 1977 to<br>December 1978 | December 1978 to<br>November 1979 |
|-----------------------------------|-----------------------------------|-----------------------------------|
| Shelter                           | 11.1                              | 17.3                              |
| Home Purchase                     | 11.3                              | 16.0                              |
| Mortgage Interest Costs <u>a/</u> | 22.0                              | 34.2                              |
| Taxes and Insurance <u>a/</u>     | -0.7                              | 6.2                               |
| Maintenance and Repairs           | 10.2                              | 10.0                              |
| Residential Rent                  | 7.4                               | 8.2                               |
| Other Rental Costs                | 12.7                              | 12.8                              |

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

a/ Data not seasonally adjusted.

Figure 3.  
Energy Trends in the United States, 1960-1980



SOURCES: U.S. Department of Energy, Energy Information Administration; U.S. Department of Commerce, Bureau of Economic Analysis; Data Resources, Incorporated; Central Intelligence Agency, National Foreign Assessment Center.

NOTE: 1979 value for oil consumption is based on data through October; for imports, on data through September. 1980 values for consumption and imports assume no increase from 1979 levels.

**Cost of U.S. Oil Imports as a Percent of National Income**

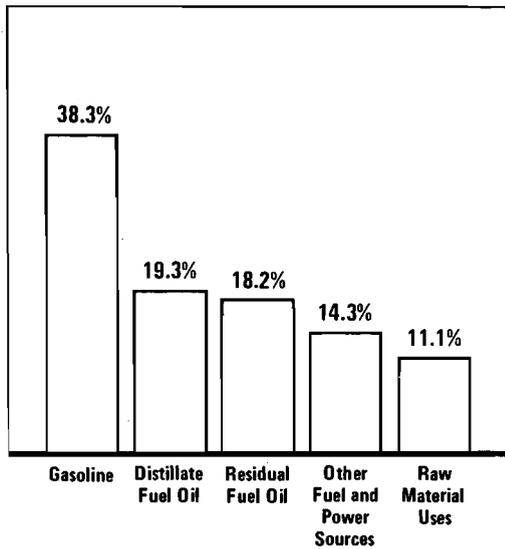
| YEAR | PERCENT          |
|------|------------------|
| 1960 | 0.3              |
| 1965 | 0.3              |
| 1970 | 0.3              |
| 1975 | 1.9              |
| 1978 | 2.2              |
| 1979 | 2.7              |
| 1980 | 4.0 <sup>a</sup> |

<sup>a</sup>Estimated

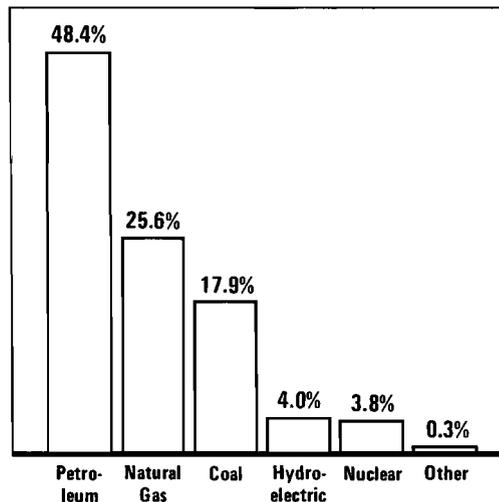
**Sources of U.S. Oil Imports, 1978**

| COUNTRY              | PERCENT |
|----------------------|---------|
| Saudi Arabia         | 14.1    |
| Nigeria              | 11.2    |
| Libya                | 8.0     |
| Venezuela            | 7.9     |
| Algeria              | 7.8     |
| Iran                 | 6.8     |
| Indonesia            | 6.7     |
| Canada               | 5.8     |
| Virgin Islands       | 5.3     |
| United Arab Emirates | 4.7     |
| Mexico               | 3.9     |
| All Other            | 17.8    |

**Functional Uses of Oil in the United States, 1978**



**U.S. Energy Consumption by Primary Energy Source, 1978**



|                                     | 1960 | 1965 | 1970 | 1975 | 1978 | 1979 | 1980 |
|-------------------------------------|------|------|------|------|------|------|------|
| Imports as a Percent of Consumption | 18.6 | 21.5 | 23.3 | 37.1 | 43.5 | 42.7 | 42.7 |

SOURCES: U.S. Department of Energy, Energy Information Administration; U.S. Department of Commerce, Bureau of Economic Analysis; Data Resources, Incorporated; Central Intelligence Agency, National Foreign Assessment Center.

The upward push on house prices resulted partly from the increasing number of potential purchasers born during the 1950s baby boom, but the major thrust came from the acceleration of inflation generally. In part, rapidly rising prices fueled the speculative demand for housing; in addition, they contributed to the decision of the Federal Reserve to tighten credit conditions further. Mortgage interest costs climbed about 34 percent in 1979. Since mortgage interest costs account for more than 7 percent of the CPI, the increase added about 1-1/2 percentage points to the rate of consumer price inflation in 1979.

### Food Prices

Consumer food prices increased by about 9-1/2 percent in 1979. The principal factors in the increase were reduced beef supplies, adverse weather, and higher production, transportation, and retailing costs stemming largely from rising wages and energy prices.

The supply of beef was constrained because cattle herds were the smallest since 1969, about 16 percent below the 1975 cattle-cycle peak. Beef production was also reduced by some withholding of heifers from slaughter in order to begin rebuilding herds.

Poor weather in California and Texas reduced the production of fresh fruits and vegetables early in the year, and consumer prices for these products jumped about 15 percent during 1979. In addition, a drought in the Soviet Union increased attempted Russian purchases of wheat and corn to 25 million tons, helping to drive up their prices. The trade embargo recently announced by President Carter, however, halted shipment of 17 million metric tons of grain to the Soviets. Since the President also announced that the Administration would try to offset the impact of the embargo on farm incomes, the effect on grain prices will not be clear until the details of a price-support program are worked out.

Reflecting the costs of processing, transporting, and retailing food, the overall farm-retail spread increased by more than 12 percent in 1979, whereas the farm value increased by less than 4 percent.

### Other Prices

Apart from energy, shelter, and food prices, other consumer prices increased by about 7-1/4 percent in 1979--a still rapid rate that would lead to a doubling of prices in 10 years. These other

prices--principally for apparel, medical care, home furnishings, housekeeping supplies and services, automobiles, other private and public transportation, entertainment, personal care goods and services, and education--tend to move closely with labor costs. This is because labor compensation is the predominant cost of producing these goods and services, accounting for more than two-thirds of total factor costs in the U.S. economy. Hence, to understand the behavior of these prices, one must first understand the behavior of wages.

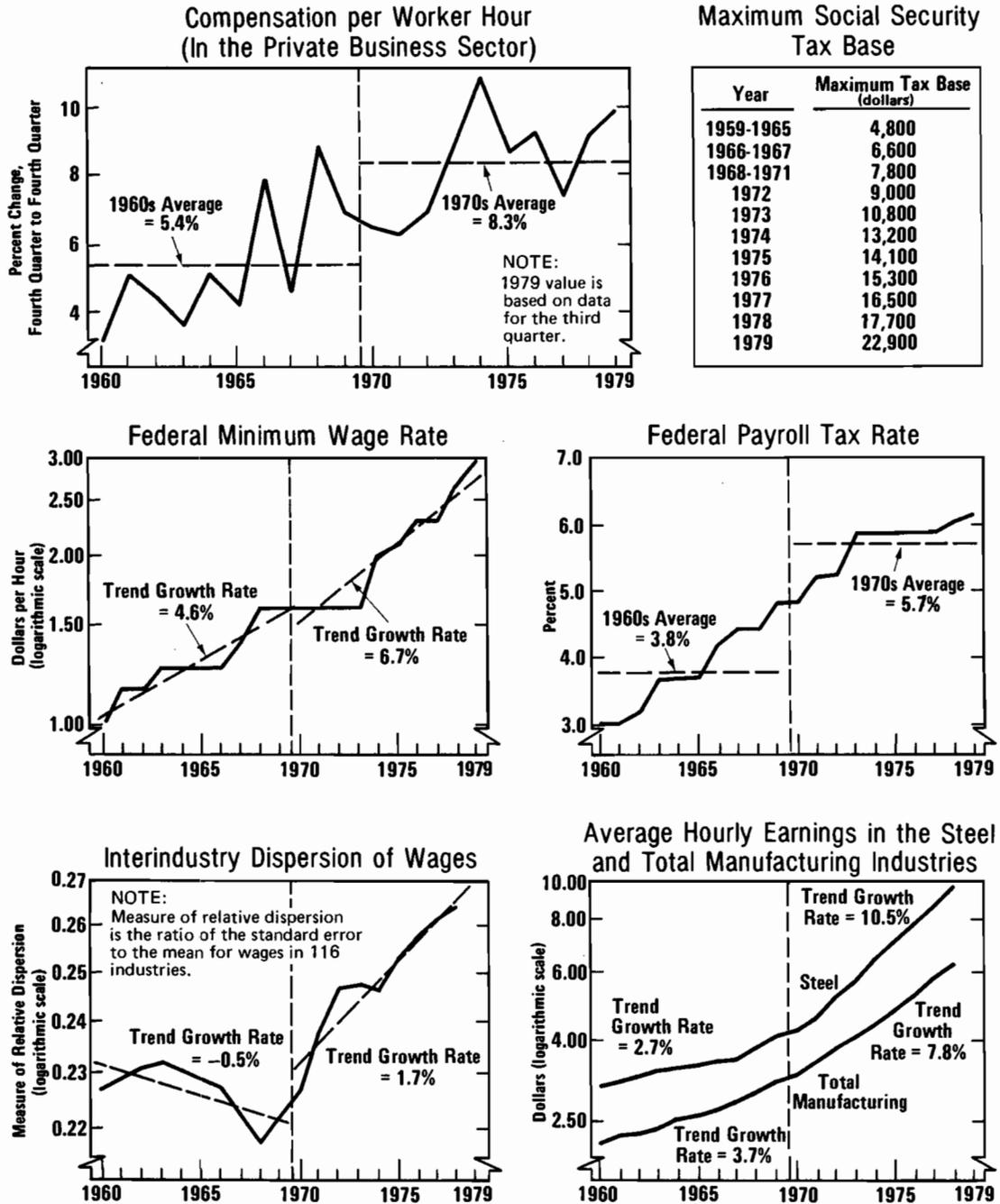
### Labor Costs

Compensation per hour in the private business sector increased at a 9.7 percent annual rate during the first three quarters of 1979--about 0.4 percentage point higher than during the first three quarters of 1978. The continued high rate of wage gain resulted largely from three factors. First, and most important, was the continued high rate of inflation. Many wage rates, especially those paid to workers in large or effectively unionized firms, are indexed--formally or informally--to the past rate of change of consumer prices. Second, in some parts of the country and for certain skills, labor shortages existed. Third, labor costs were increased by mandated rises in the statutory minimum wage and in Social Security contributions. These government actions are estimated to have added about 0.8 percentage point to the overall increase in labor compensation in 1979.

Recent wage movements are a continuation of a longer-term trend. Attempts to catch up to more rapid rates of inflation, combined with larger minimum wage adjustments and higher payroll taxes, produced a relatively high growth rate in labor compensation during the 1970s (Figure 4).

Another important characteristic of wage behavior, both last year and in the decade of the 1970s, is that compensation gains in one sector were not matched in all other sectors. Over the past 10 years, workers in high-wage industries such as automobiles, primary metals, machinery, rubber, chemicals, paper, petroleum, transportation, and utilities have generally received significantly higher rates of wage increase than workers in lower-wage industries (Figure 4). This increase in the interindustry wage spread has occurred principally because many high-wage workers have the power to index their compensation to the rise in consumer

Figure 4.  
Wage Trends, 1960-1979



prices, no matter what the cause, while many lower-wage workers do not. 2/

The indexing of wages to past inflation rates can lead to at least two problems. First, large increases in labor costs have helped make a number of industries less competitive internationally. For example, average hourly earnings in the basic steel industry rose at a 10-1/2 percent annual rate in the 1970s, well above the average growth rate for all manufacturing industries. 3/ Yet, during this period, imports held a significant share of the domestic market, profits were low, some steel-producing capacity was shut down, and jobs were eliminated. Because of deteriorating industry conditions, the Congress has been under strong pressure to limit foreign steel imports. Second, indexing in its various forms--including formal cost-of-living escalators, informal wage catch-up, and government actions--contributes significantly to the momentum of inflation. With indexing, high inflation increases labor costs even when unemployment is high. These higher costs then put upward pressure on prices, and the spiral continues.

One factor that helps to dampen such a price-wage-price spiral is productivity growth. But productivity increases lagged badly in the 1970s, and 1979 was no exception. During the first three quarters of 1979, output per hour in the private business sector fell at a 2 percent annual rate. Proposals to increase the growth of labor productivity will be reviewed in Chapter V.

### Profit Margins

The slowdown in the economy prevented the higher costs of production from being fully passed through as higher prices in 1979. Thus, despite the well-publicized high earnings in the

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2/ In Figure 4, the interindustry dispersion of wage rates is measured by the coefficient of variation calculated for 116 three-digit industries drawn from the Bureau of Labor Statistics establishment survey.

3/ Labor costs were estimated to be 39 percent of total input costs in steel production in 1974. Using that share and assuming everything else stayed the same, unit input costs in steel would have been roughly 11 percent lower by the end of 1979 if industry wages had increased no faster than in manufacturing as a whole since 1970.

oil industry, net profit margins for all corporations (after capital consumption and inventory valuation charges) fell in 1979. Total U.S. factor cost per unit of output (that is, the sum of labor costs and the gross return on capital) grew by 7-1/2 percent, well below the more than 10 percent rise in unit labor costs alone.

#### CONSTANT-DOLLAR PRODUCTION AND SALES

Inflation-adjusted spending by all major sectors in the economy--households, businesses, international traders, and state and local governments--slowed markedly or declined in 1979 relative to the previous few years. (Federal government spending will be analyzed in the next chapter.) The weakening of the economy is reflected in the sharply reduced growth of real final sales, the most comprehensive measure of total spending in the economy. As can be seen in Table 2, the greatest strength in 1979 came from exports. Excluding foreign purchases, real final sales rose by only 0.8 percent during 1979.

TABLE 2. GROWTH IN REAL FINAL SALES AND ITS NONFEDERAL COMPONENTS  
(Percent change, fourth quarter to fourth quarter)

|                                      | 1977 | 1978 | 1979 |
|--------------------------------------|------|------|------|
| Total Final Sales                    | 4.9  | 4.8  | 1.5  |
| Personal Consumption Expenditures    | 5.3  | 4.5  | 1.6  |
| Fixed Investment                     | 9.8  | 7.2  | -1.2 |
| Nonresidential                       | 7.5  | 10.5 | 1.7  |
| Residential                          | 15.4 | -0.2 | -8.3 |
| Exports                              | -0.4 | 17.0 | 8.9  |
| Imports                              | 8.3  | 10.5 | 2.2  |
| State and Local Government Purchases | 2.6  | 4.0  | -0.4 |

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

Toward the end of 1979, reduced demand for and production of automobiles and houses flashed warning signals for 1980. Taken together, these two sectors--along with related products such as sheet steel, tires, lumber, home furnishings, and appliances--account for a substantial portion of total U.S. output.

### The Household Sector

The household sector was characterized by weakness in spending for goods and housing, accompanied by increasingly negative consumer sentiments and lagging real disposable personal income.

#### Personal Consumption Expenditures

Personal consumption expenditures include all household purchases of goods and services except houses and account for more than 60 percent of total Gross National Product (GNP). As shown in Table 3, growth of consumer spending weakened notably in 1979. Consumption purchases in constant dollars rose only 1.6 percent, well below the increases of the previous two years.

TABLE 3. CHANGES IN CONSTANT-DOLLAR PERSONAL CONSUMPTION EXPENDITURES (Percent change, fourth quarter to fourth quarter)

|   | Weight<br>in 1979<br>(percent) | 1977 | 1978 | 1979  |
|---|--------------------------------|------|------|-------|
| Total Personal Consumption Expenditures | 100.0                          | 5.3  | 4.5  | 1.6   |
| Automobiles                             | 7.0                            | 10.4 | 4.9  | -12.2 |
| Non-Auto Durables                       | 9.3                            | 11.3 | 8.2  | 1.9   |
| Nondurable Goods                        | 38.1                           | 3.8  | 3.5  | 1.2   |
| Services                                | 45.6                           | 4.8  | 4.5  | 4.1   |

SOURCE: Department of Commerce, Bureau of Economic Analysis.

Much of the weakness in consumption in 1979 resulted from a slump in automobile purchases, caused by a number of factors including gasoline shortages, a shift in demand to smaller models, which are in short supply, and slow income growth. The number of new cars sold fell sharply from the beginning of 1979 to midyear (Table 4). In the third quarter, sales of domestic cars received

TABLE 4. NEW AUTOMOBILE SALES (Thousands of units)

|                      | 1977  | 1978  | 1979  | 1978  | 1979  |       |       |       |
|----------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      |       |       |       | Q4    | Q1    | Q2    | Q3    | Q4    |
| Domestic-Type Models | 9,132 | 9,299 | 8,403 | 9,206 | 9,322 | 8,138 | 8,646 | 7,505 |
| Foreign Models       | 2,066 | 2,000 | 2,330 | 1,902 | 2,316 | 2,501 | 2,150 | 2,351 |

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

a small boost from price rebates and dealer incentive programs. But the higher demand proved temporary as sales once again dropped in the fall and early winter. As a result of the weak demand and high inventories of unsold cars, domestic automakers have cut back production sharply. The scheduled output for the first quarter of 1980 is 1.9 million cars--compared with the 1.5 million produced in the fourth quarter of 1974, the low point of the 1974-1975 recession. Because of the current production cutbacks, 150,000 auto workers had been laid off indefinitely by mid-January.

Purchases of other goods--both durable and nondurable--followed a pattern similar to that for autos. After slumping in the spring, perhaps in response to gasoline shortages and disruptions associated with the Teamsters' strike, sales rebounded somewhat. Under the constraint of lagging real income growth, however, this spending at the end of 1979 was only somewhat higher than a year earlier.

The only component of consumer outlays to show strength in 1979 was household spending for services, which, adjusted for inflation, rose 4 percent from late 1978. This suggests that, during periods of lagging real incomes, it is more difficult to cut back the consumption of services than of goods. Medical care, rent, transportation, and household operations are the major categories of spending for services.

## Housing Expenditures

Household investment in new housing accounts for only about 5 percent of total GNP, but historically this sector has been volatile and has played a disproportionate role in business cycles. Constant-dollar spending for residential construction fell more than 8 percent in 1979, compared with virtually no change in 1978 and a 15 percent rise in 1977 (Table 2).

Through the first 11 months of 1979, the number of new houses sold fell at a somewhat greater rate, off about 12 percent from sales a year earlier. Despite this weaker sales performance, cautious building practices prevented a run-up in the stock of unsold new houses, as happened in 1974-1975. In November, 399,000 units were available for sale, down from the 425,000 level in the second quarter and about the same as a year earlier.

The number of new housing units started in 1979 fell roughly 300,000 from the 2 million level experienced in each of the two previous years, with the decline concentrated in single-family houses (Table 5). Yet, even with this lower level of activity, residential construction was still relatively strong for a period of rapidly rising interest rates, increased down payments, and weak income growth.

TABLE 5. HOUSING STARTS, PERMITS, AND SALES (Thousands of units, seasonally adjusted, annual rates)

|  | 1977  | 1978  | 1979          | 1978  | 1979  |       |       |               |
|--|-------|-------|---------------|-------|-------|-------|-------|---------------|
|  |       |       |               | Q4    | Q1    | Q2    | Q3    | Q4            |
| Starts, Total  | 1,963 | 2,007 | 1,722         | 2,078 | 1,615 | 1,834 | 1,834 | 1,604         |
| Single-Family  | 1,438 | 1,421 | 1,173         | 1,492 | 1,119 | 1,264 | 1,238 | 1,072         |
| Multi-Family   | 525   | 586   | 549           | 586   | 496   | 570   | 596   | 533           |
| Permits, Total   | 1,681 | 1,799 | 1,519         | 1,817 | 1,496 | 1,591 | 1,652 | 1,336         |
| Single-Family  | 1,122 | 1,183 | 954           | 1,216 | 952   | 1,032 | 1,015 | 815           |
| Multi-Family   | 559   | 617   | 565           | 601   | 544   | 560   | 637   | 521           |
| Sales of New Single-Family Houses                        | 819   | 817   | 720 <u>a/</u> | 835   | 752   | 706   | 749   | 651 <u>b/</u> |
| Number of Months' Supply at Current Sales Rate <u>c/</u> | 5.6   | 6.2   | 7.1 <u>a/</u> | 6.1   | 6.8   | 7.3   | 6.8   | 7.7 <u>b/</u> |

SOURCE: U.S. Department of Commerce, Bureau of Census.

a/ Based on data for the first 11 months of 1979.

b/ Based on data for October and November.

c/ Average of monthly values for the period.

Housing demand and production might have dropped more sharply in 1979 but for a number of offsetting factors. The purchase of a house was widely perceived to be a good hedge against inflation; mortgage interest payments are tax-deductible; approximately 2 million new housing units a year are needed to satisfy the demand for new household formation. Finally, and most important, mortgage credit remained available for much of the year, albeit at high cost, despite the rapid rise in interest rates generally. Usually during a period of tight money, funds flow out of lending institutions; that outflow was stemmed in 1979 by a loosening of regulations that had prevented thrift institutions from paying market rates on their deposits.

Toward the end of 1979, however, high interest rates began taking a heavy toll on housing activity. After the sharp jump in borrowing costs attendant upon the credit tightening by the Federal Reserve in October, residential construction sagged notably. Total housing starts fell 14 percent in November to a 1.52 million unit rate and remained at that low level in December; single-family starts fell 17 percent. Building permits dropped by a similar rate. Moreover, new single-family house sales fell 13 percent in November from an already weak October level. The recent weakness in housing activity is directly traceable to high interest rates and oversized monthly mortgage payments. Surveys taken after the jump in borrowing costs showed the apparent beginning of a dramatic adverse shift in household attitudes about buying a house (see Table 7 below).

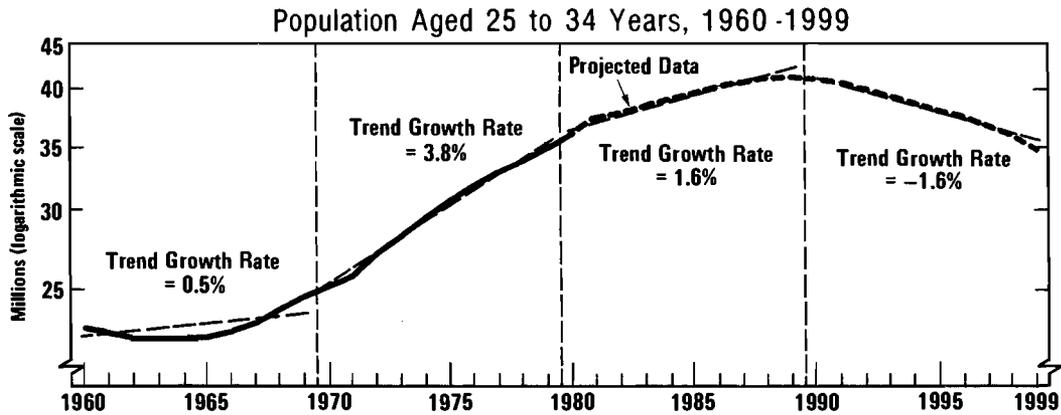
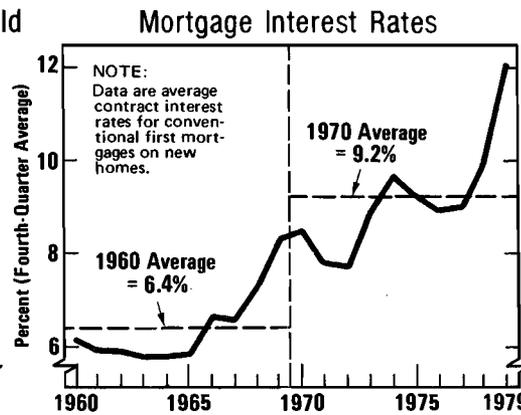
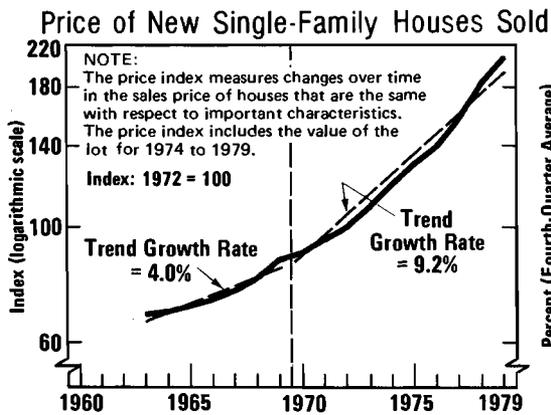
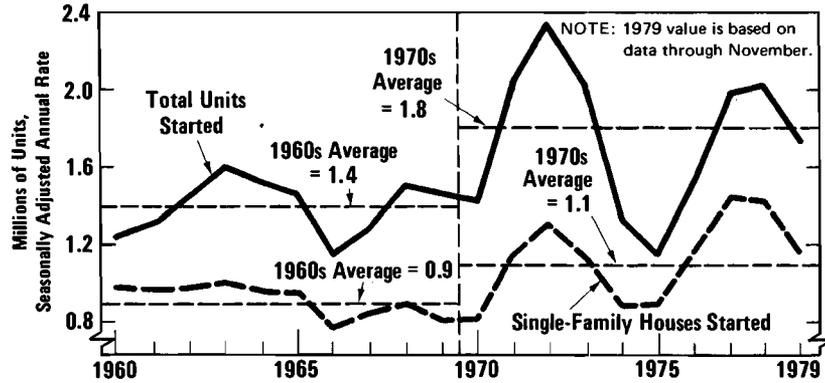
The behavior of the housing sector in 1979 was, on the whole, consistent with a number of basic trends for the decade of the 1970s (Figure 5). Most notably, home purchase and financing costs continued their sharp upward trends. Despite the tail-off in building toward the end of the decade, it was evident that the basic demand for homes would remain strong well into the 1980s. This is because initial home purchases occur most frequently in the 25-to-34 age group, which is expected to increase throughout most of the decade.

#### Indicators of Future Household Spending

The available indicators of household spending in the coming months of 1980 suggest continued weakness. Consumer attitudes about the future are quite pessimistic, and assessments of whether the present is a good time to buy have turned much more negative recently--especially for housing. Household debt keeps climbing relative to income, and credit has become less available and much

Figure 5.  
Trends in Housing, 1960-1979

Housing Units Started (Privately Owned Units)



SOURCES: U.S. Department of Commerce, Bureau of the Census; U.S. Department of Housing and Urban Development.

more costly. Finally, real income growth has been weak, and the ratio of personal saving to disposable income is at a very low--probably unsustainably low--level.

Consumer Attitudes. Composite measures of consumer sentiment about economic conditions fell steadily during 1979, reaching values at year-end that had not been experienced since the 1974-1975 recession (Table 6). Despite these declining evaluations of current and expected personal and business conditions, plans to make a major purchase (principally homes, automobiles, or appliances) remained relatively strong until the autumn.

In part, the relative strength of current buying plans for much of 1979 is attributable to a buy-in-advance psychology associated with high and accelerating inflation rates. In addition, some of the midyear strength in buying plans came from price rebates available with new car purchases and from an increased desire to own more fuel-efficient automobiles.

TABLE 6. INDEX OF CONSUMER SENTIMENT (Index: February 1966 = 100)

|  | 1977 | 1978 | 1979 |     |     |     |
|--|------|------|------|-----|-----|-----|
|  |      |      | Q1   | Q2  | Q3  | Q4  |
| Overall Index                                  | 87   | 79   | 72   | 67  | 64  | 62  |
| Personal Financial Attitudes                   |      |      |      |     |     |     |
| Change from a Year Ago                         | 105  | 104  | 98   | 89  | 91  | 83  |
| Expected Change Next Year                      | 115  | 108  | 99   | 92  | 96  | 97  |
| Expected Business Conditions                   |      |      |      |     |     |     |
| Next 12 Months                                 | 113  | 93   | 68   | 58  | 48  | 51  |
| Next 5 Years                                   | 90   | 73   | 61   | 58  | 46  | 51  |
| Market Conditions                              |      |      |      |     |     |     |
| Buying Conditions for<br>Large Household Goods | 145  | 141  | 138  | 135 | 131 | 119 |

SOURCE: University of Michigan, Survey Research Center.

NOTE: The index is calculated as the percent of respondents saying "good times" or "better" minus the percent saying "bad times" or "worse," plus 100. For example, in the first quarter of 1979, about 34.5 percent of the respondents felt that, in terms of their personal financial situations, they were better off than a year earlier, 36.5 percent felt worse off, and 28 percent felt the same; the associated index value, therefore, is 98.

Surveys made late in the year, however, suggest a significant deterioration in overall buying plans, largely in response to increased interest rates and tighter credit conditions. Favorable attitudes for purchasing autos or large durable goods did not decline between August and November, but unfavorable attitudes increased somewhat (Table 7). Buying attitudes for houses, however, which are more sensitive to credit conditions, deteriorated sharply over the same period. In a November survey, 61 percent of all households cited tight credit conditions as a reason why "now is a bad time to buy a house"--up from 27 percent in August 1979 and from 21 percent in the previous November.

TABLE 7. BUYING ATTITUDES FOR AUTOS AND HOUSES (Percent of respondents)

|                         | November<br>1978 | February<br>1979 | May<br>1979 | August<br>1979 | November<br>1979 |
|-------------------------|------------------|------------------|-------------|----------------|------------------|
| <b>Autos <u>a/</u></b>  |                  |                  |             |                |                  |
| Good Time to Buy        | 39               | 43               | 39          | 38             | 38               |
| Bad Time to Buy         | 40               | 39               | 48          | 48             | 52               |
| <b>Houses <u>b/</u></b> |                  |                  |             |                |                  |
| Good Time to Buy        | 45               | 49               | 51          | 46             | 28               |
| Bad Time to Buy         | 44               | 43               | 42          | 48             | 66               |

SOURCE: University of Michigan, Survey Research Center.

a/ The question was: "Do you think the next 12 months or so will be a good or a bad time to buy a car?"

b/ The question was: "Generally speaking, do you think now is a good time or a bad time to buy a house?"

Consumer Financial Positions. Consumer debt relative to income continued rising in 1979, reaching historically high levels. Repayments on home mortgages and consumer installment credit loans were 23 percent of disposable income late in 1979 (Table 8). This repayment ratio had averaged 20.9 for the 1970s as a whole and 18.7 for the 1960s.

TABLE 8. HOUSEHOLD DEBT BURDEN

|   | 1976 | 1977 | 1978 | 1979 |      |      |
|---|------|------|------|------|------|------|
|   |      |      |      | Q1   | Q2   | Q3   |
| Installment and Mortgage<br>Credit Outstanding (as a<br>percent of disposable<br>personal income) | 63.3 | 66.3 | 69.4 | 70.8 | 71.9 | 72.7 |
| Installment Credit and<br>Mortgage Repayments (as a<br>percent of disposable<br>personal income)  | 20.2 | 21.3 | 22.2 | 22.3 | 22.7 | 23.1 |

SOURCE: Federal Reserve System, Board of Governors.

A high debt burden for households implies less ability to finance consumption purchases with credit, and thus suggests weaker spending by households in 1980.

Credit Availability and Cost. Credit availability historically has most affected housing activity. Thrift institutions have been constrained by legal limits on interest rates they can pay on deposits of less than \$100,000. In the past, then, when market rates exceeded the legal maximum (currently 5-1/2 percent on passbook accounts), funds were withdrawn from savings-and-loan associations and used to purchase higher-yield instruments such as Treasury bills. In June 1978, however, regulations were changed to permit market rates to be paid on \$10,000 deposits held for six months. These new certificates helped keep mortgage money widely available for much of 1979.

But the new arrangements cannot wholly insulate the housing sector from the effects of tight money. The large monthly payments resulting from high interest rates do much to prevent some households from obtaining mortgages. Under a qualification rule often used by lenders, the annual income needed to qualify for a mortgage on a median-priced home jumped sharply in 1979, up by roughly 25 percent from 1978, outrunning the estimated 10 percent rise in median family income (Table 9).

TABLE 9. ANNUAL INCOME LEVEL NEEDED TO QUALIFY FOR A MORTGAGE (Dollars)

|                              | 1976   | 1977   | 1978   | 1979     |        |           |          |
|------------------------------|--------|--------|--------|----------|--------|-----------|----------|
|                              |        |        |        | February | May    | August    | November |
| Qualifying In-<br>come Level | 13,700 | 15,100 | 18,000 | 21,000   | 22,000 | 23,400    | 24,100   |
| Median Family<br>Income      | 15,923 | 16,009 | 17,640 |          | 19,264 | <u>a/</u> |          |

SOURCES: Federal Home Loan Bank Board; U.S. Department of Commerce, Bureau of the Census.

NOTE: Figures are based on a 20 percent down payment, the median sales price, and the effective interest rate for a 30-year mortgage on a new, single-family house, using the rule that the monthly payment (principal and interest) should not exceed 25 percent of gross monthly income.

a/ Estimate for the whole of 1979.

In related developments, the squeeze on the earnings of thrift institutions caused by the rising costs of obtaining funds, the outflow of deposits from these institutions to more flexible instruments such as money-market mutual funds, and the interest ceilings imposed by state usury laws have combined to limit the availability of housing loans, especially toward the end of 1979 (Table 10). 4/ The high cost and reduced availability of mortgage credit will likely depress activity significantly during the first half of 1980.

Personal Income and Saving. The growth in disposable (after-tax) personal income is a principal determinant of changes in total household spending. After adjustment for inflation, disposable personal income increased only 0.2 percent during 1979, down

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4/ In late December, President Carter signed into law a bill suspending all states' ceilings on mortgage rates until March 31, 1980. Twenty states that had mortgage rate ceilings below general market rates were directly affected, but how much this action will boost residential construction is uncertain.

TABLE 10. NET SAVINGS INFLOW AT INSURED SAVINGS AND LOAN ASSOCIATIONS (Millions of dollars, seasonally adjusted monthly rates)

| 1977  |       |       |       | 1978  |       |       |       | 1979  |     |       |     |
|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-----|
| Q1    | Q2    | Q3    | Q4    | Q1    | Q2    | Q3    | Q4    | Q1    | Q2  | Q3    | Q4  |
| 2,872 | 2,601 | 3,163 | 2,031 | 1,492 | 1,594 | 2,523 | 2,212 | 2,345 | 699 | 1,019 | 935 |

SOURCE: Federal Home Loan Bank Board.

sharply from the previous two years (Table 11). This slight improvement is attributable to an increase in total employment early in 1979; increased wage rates alone were not sufficient to offset the effects of rapid inflation and higher taxes. Thus, constant-dollar disposable income per employee fell by about 2-1/2 percent in 1979.

TABLE 11. GROWTH IN PERSONAL INCOME (Percent change, fourth quarter to fourth quarter)

|   | 1977 | 1978 | 1979 |
|---|------|------|------|
| Nominal Personal Income   | 11.5 | 13.0 | 10.9 |
| Nominal Disposable Personal Income                                      | 11.3 | 12.0 | 10.1 |
| Constant-Dollar Disposable Personal Income                              | 5.3  | 4.2  | 0.2  |
| Constant-Dollar Disposable Personal Income per Nonagricultural Employee | 0.6  | -0.5 | -2.4 |

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics.

a/ Adjusted using the personal consumption expenditures (PCE) deflator; for an analysis of the differences between this measure of inflation and the CPI, see the Appendix.

The recent trends in personal income are not atypical of the 1970s as a whole. The decade was characterized by relatively slow overall wage growth relative to inflation and taxes as well as a trend to part-time jobs. The growth of total constant-dollar disposable income rose at a 3.3 percent annual rate in the 1970s, compared to a 4.2 percent rate in the 1960s (Figure 6). In addition, much of the growth in total real income resulted from the rapid expansion of total employment. Consequently, the rise in real disposable income per employee averaged only 0.8 percent at an annual rate in the past 10 years, well below the 1.3 percent rate of the 1960s. In part, this slowdown reflects the lagging rate of productivity advance in the 1970s.

As Figure 6 also shows, personal saving relative to personal disposable income fell to an exceptionally low level in 1979. The second half of the year saw an especially sharp decline (Table 12). Personal saving may be viewed as the sum of the net acquisition of financial assets--such as cash and bank deposits, securities, and the net equity of individuals in life insurance plans and in private pension funds--and physical assets (largely houses, not consumer durable goods) less the sum of net borrowing and of capital consumption allowances. During periods of inflation, some positive level of saving is needed just to maintain the purchasing power of cash, bank deposits, bonds, and other forms of financial assets; thus, the low rate of saving suggests that households may be eating into their capital in order to maintain their living standards as real disposable income lags.

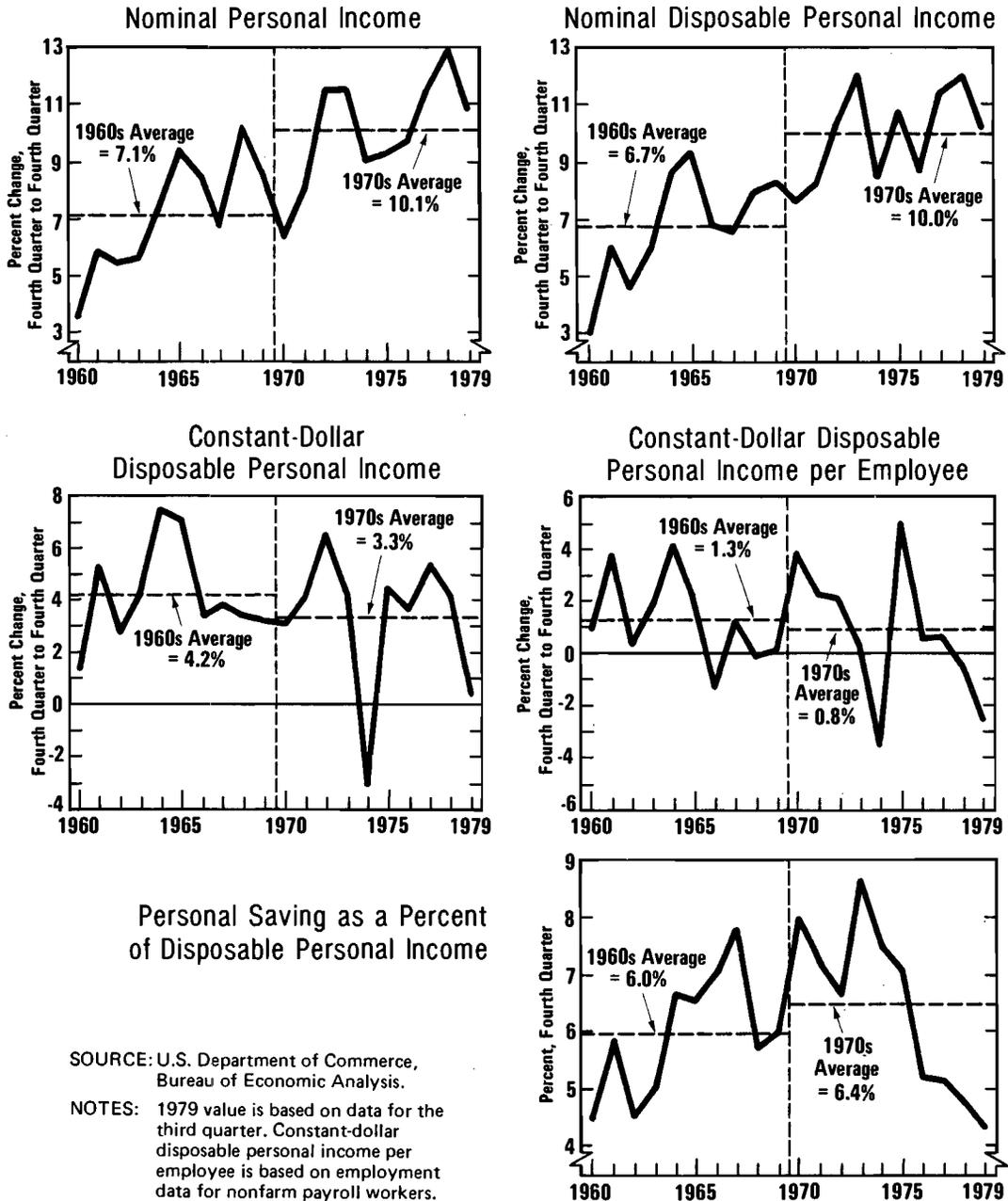
TABLE 12. PERSONAL SAVING AS A PERCENT OF DISPOSABLE PERSONAL INCOME

|             | 1976 | 1977 | 1978 | 1979 |     |     |     |
|-------------|------|------|------|------|-----|-----|-----|
|             |      |      |      | Q1   | Q2  | Q3  | Q4  |
| Saving Rate | 5.8  | 5.0  | 4.9  | 5.0  | 5.4 | 4.3 | 3.3 |

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Another important way in which households may be supporting current consumption by liquidating wealth is by realizing capital gains in housing. This is done by selling a house for a capital

Figure 6.  
 Personal Income and Saving Trends, 1960-1979



gain that is greater than the downpayment on the new dwelling, and spending part of the surplus. Given the likely slowdown in housing as well as the involuntary nature of some saving, many analysts view the current saving rate as unsustainably low.

### The Business Sector

Gross private domestic investment by business accounted for roughly 10-1/2 percent of constant-dollar GNP in 1979. Business capital spending is important in the short run as one component of total spending in the economy. From a longer-term perspective, however, it plays another important role, adding to productive capacity and promoting higher living standards. In general, more plant and equipment per worker hour leads to higher productivity and increased real income.

Business Fixed Investment. The rise in real business spending for plant and equipment slowed sharply in 1979 from its rate of growth during the previous two years (Table 13). This slowdown occurred despite a rate of manufacturing capacity utilization that historically has been associated with more rapid expansions of facilities.

Of the components of real business fixed investment (BFI), nonresidential construction activity showed some strength in 1979 while spending for durable equipment actually fell. In the latter category, weakness was concentrated in business purchases of autos, trucks, and buses, which, by the fourth quarter, were 23 percent below a year earlier. By contrast, spending for other machinery and equipment increased nearly 9 percent in 1979, about the same pace as in 1978.

Taking the decade as a whole, the growth of constant-dollar BFI was not high relative to the rest of the economy. Sharply slower rates of growth in real BFI characterized the 1970s relative to the 1960s (Figure 7). The trend growth rate was 2-1/2 percent in the 1970s, 4-1/2 percentage points slower than in the previous decade. <sup>5/</sup> Consequently, the capital stock grew more slowly, as

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<sup>5/</sup> The slowdown in BFI growth occurred despite more mandated investment in pollution abatement equipment in the 1970s. For some estimates of the share of investment going to environmental improvement, see J.R. Norsworthy, Michael Harper, and Kent Kunze, "The Slowdown in Productivity Growth," Brookings Papers on Economic Activity (1979:2), pp. 404-5.

TABLE 13. BUSINESS FIXED INVESTMENT AND CAPACITY UTILIZATION

|   | 1977  | 1978 | 1979  |
|---|---|------|-------|
|   | <u>Percent Change, 4th Quarter to 4th Quarter</u>   |      |       |
| Constant-Dollar Non-residential Fixed Investment, Total | 7.5   | 10.5 | 1.7   |
| Structures  | 4.4   | 16.0 | 6.0   |
| Producers' Durable Equipment                            | 8.8   | 8.1  | -0.2  |
| Autos, trucks, and buses                                | 20.3  | 8.0  | -23.0 |
| Other machinery and equipment                           | 4.8   | 8.1  | 8.9   |
|   | <u>Output as a Percent of Capacity, 4th Quarter</u> |      |       |
| Manufacturing Capacity Utilization                      | 82.6  | 86.4 | 84.6  |

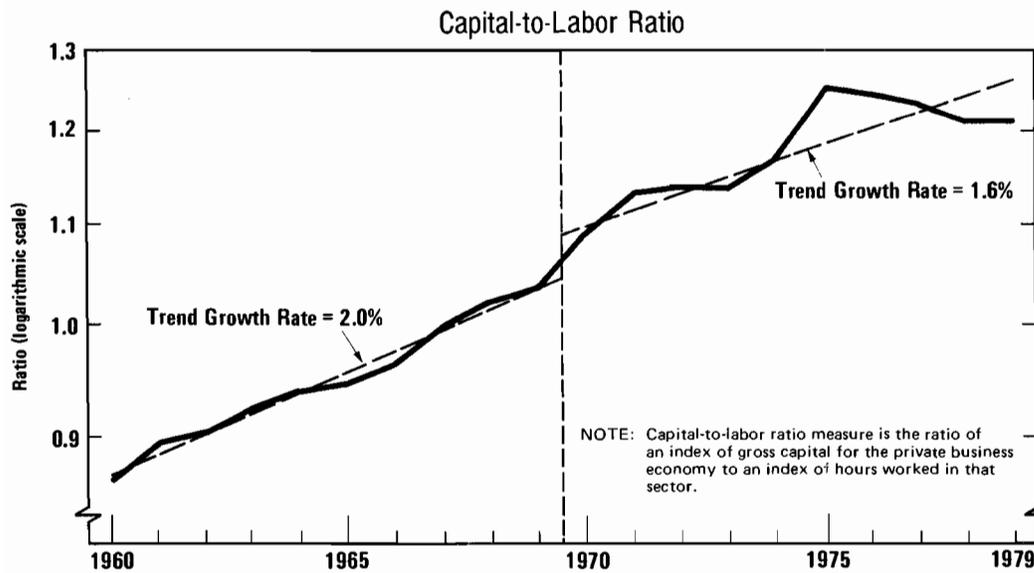
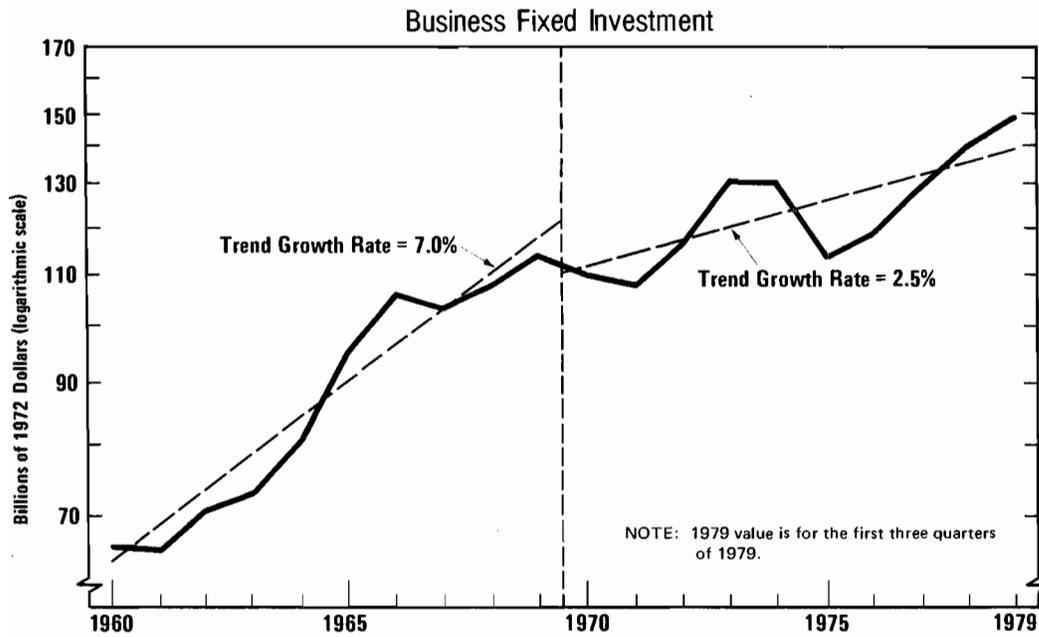
SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve System, Board of Governors.

did the capital available per worker. Indeed, beginning about mid-decade, the ratio of capital to hours worked hit a plateau, reflecting both slower capital growth and a rapid increase in labor hours. This stagnation of the capital-to-labor ratio has been one factor underlying the poor productivity performance in recent years.

Inventory Investment. Despite some rise in inventories relative to the two previous years, 1979 as a whole provided little evidence that stocks were becoming excessive relative to sales (Figure 8). There was nothing like the rapid buildup in inventories that preceded the 1974-1975 recession. The still relatively lean stocks suggest that any downturn in production early in 1980 would likely be mild, because there is no large overhang of inventories to be worked down in response to weakened demands.

But the current low stock-to-sales ratio does not guarantee that there will not be a severe recession. Swings in the ratio

Figure 7.  
Investment Behavior, 1960-1979

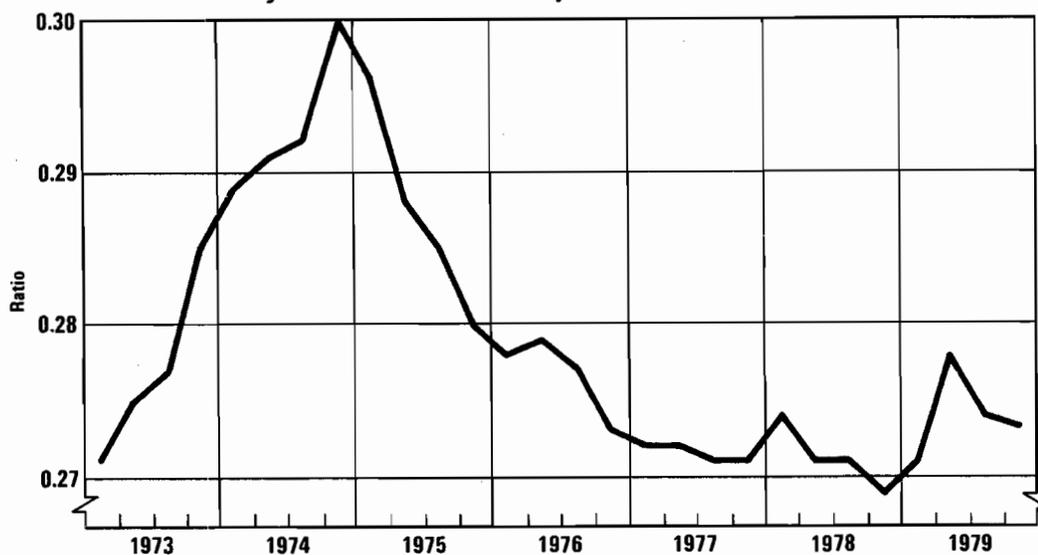


SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics.

are caused more by variations in sales than by movements in stocks. Thus, a sharp drop in sales could lead quickly to a significant inventory imbalance and corrective cutbacks in production. In addition, the preferred level of inventories relative to sales may have been substantially reduced by the sharp increase in carrying costs that has resulted from higher real interest rates. For example, many auto dealers have reportedly been attempting to cut back on the number of their showroom models because of burdensome interest costs.

Figure 8.

### Business Inventory-to-Sales Ratio, Adjusted for Inflation, 1973-1979



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

Indicators of Future Business Spending. On balance, the available indicators do not suggest robust gains in capital spending in 1980, although not all the signs are pessimistic. On the positive side, capacity utilization in the manufacturing sector remains in the range historically associated with expansion. In addition, a number of major investment projects have been mandated by environmental and energy-conservation legislation. Finally, a large backlog of unfilled orders for investment goods remains to be worked down (Table 14).

TABLE 14. ADVANCE INDICATORS OF CONSTANT-DOLLAR BUSINESS FIXED INVESTMENT

|  | 1978  | 1979  |       |       |       |
|--|-------|-------|-------|-------|-------|
|  | Q4    | Q1    | Q2    | Q3    | Q4 a/ |
| New Orders for Nondefense Capital Goods (billions of dollars, seasonally adjusted monthly rate)                | 20.3  | 22.8  | 21.2  | 20.9  | 20.9  |
| Unfilled Orders for Nondefense Capital Goods (billions of dollars, end of period)                              | 104.2 | 115.7 | 122.8 | 126.2 | 128.4 |
| Construction Contracts for Commercial and Industrial Buildings (millions of square feet)                       | 85.7  | 98.9  | 88.3  | 88.2  | 88.6  |
| New Approved Capital Appropriations in Manufacturing (billions of dollars, seasonally adjusted quarterly rate) | 18.8  | 22.6  | 21.0  | 22.5  | n.a.  |

SOURCES: U.S. Department of Commerce, Bureau of the Census; McGraw-Hill Information Systems Company; The Conference Board.

a/ Based on data for October and November.

Other advance indicators of capital spending, however, failed to show strength during 1979. Both new orders for nondefense capital goods (measured in current dollars) and construction contracts for commercial and industrial buildings (measured in square feet) rose early in 1979 but then fell back toward 1978 levels. In addition, other construction contracts slumped in response to the moratorium on nuclear power plant construction. After adjustment for inflation, contracts and orders for plant and equipment in November 1979 were 5 percent below their year-earlier levels. New capital appropriations remained high in nominal values but failed to increase between the first and third quarters.

Most significantly, several surveys of business plans for capital spending suggest no rebound in capital spending growth in 1980. Surveys made by McGraw-Hill and Merrill-Lynch in early autumn of 1979 indicated flat or declining real capital spending in 1980. A survey made in late November and early December by the Commerce Department was somewhat more optimistic, indicating an increase between 1 and 2 percent in planned real capital spending in 1980 relative to 1979. Even such modest plans for future spending should be interpreted with care, however, because past surveys have systematically overestimated business investment during recession years.

## International Trade Sector

Net exports adjusted for inflation increased sharply last year--the second consecutive year of strength in this sector (Table 15). The vigorous performance reflected both the high economic growth experienced by major trading partners relative to the United States and the continuing impact of earlier declines in the exchange value of the dollar.

TABLE 15. RECENT DEVELOPMENTS IN INTERNATIONAL TRADE

|  | 1977  | 1978  | 1979            | 1979  |       |       |       |
|--|-------|-------|-----------------|-------|-------|-------|-------|
|  |       |       |                 | Q1    | Q2    | Q3    | Q4    |
| Net Exports of Goods and Services (billions of dollars, NIA basis)         |       |       |                 |       |       |       |       |
| Constant Dollars   | 10.3  | 11.0  | 17.7            | 17.0  | 13.2  | 20.1  | 20.7  |
| Current Dollars  | -9.9  | -10.3 | -3.5            | 4.0   | -8.1  | -2.3  | -7.7  |
| Merchandise Trade Balance (billions of dollars, balance of payments basis) | -31.0 | -34.2 | -27.7 <u>a/</u> | -6.1  | -7.7  | -7.0  | n.a.  |
| Trade-Weighted Value of the Dollar (index: May 1970 = 1.0)                 | 0.892 | 0.839 | 0.830           | 0.826 | 0.834 | 0.823 | 0.837 |

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis; The Morgan Guaranty Trust Company.

a/ Annual rate based on data through the third quarter.

In current dollars, exports and imports were nearly in balance in 1979 (on a National Income Accounts basis) with an estimated deficit of about \$3-1/2 billion, down from \$10 billion in 1978. The merchandise trade balance also improved somewhat in 1979, with strength coming from capital goods and agricultural exports, but the surge in world oil prices kept this sector still deeply in the red.

On balance, indicators of future international trade behavior suggest a continued impetus to domestic production in 1980. Most important, the projected slowdown in the U.S. economy relative to its major trading partners likely will boost real net exports, as domestic import demand drops relative to foreign demand for U.S. goods. On the minus side, the recently announced embargo on the shipment of grain and advanced technology hardware to the Soviet Union could cut export earnings by several billion dollars.

These recent developments, however, are short-term fluctuations and are not necessarily representative of longer-term trends in the U.S. international position (Figure 9). The ratio of merchandise exports to imports continued to fall during the 1970s, albeit at a somewhat slower rate than in the 1960s. The slowed decline resulted partly from large agricultural surpluses after 1972 and a slower rate of deterioration in the net balance for manufactured goods. Not surprisingly, the strongest decline in the ratio of exports to imports occurred in the mineral fuels and lubricants (basically petroleum) category.

The overall story evident from Figure 9 is that the international merchandise trade position of the United States in the past two decades worsened in a number of areas. A good deal of this decline occurred in the 1960s but was not reversed in the 1970s.

#### State and Local Government Sector

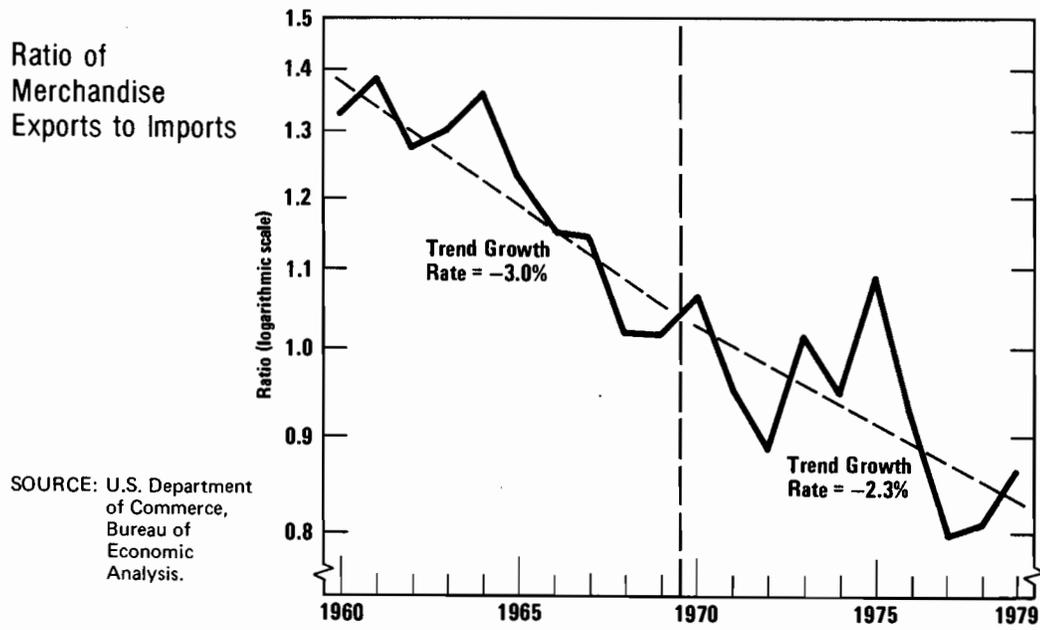
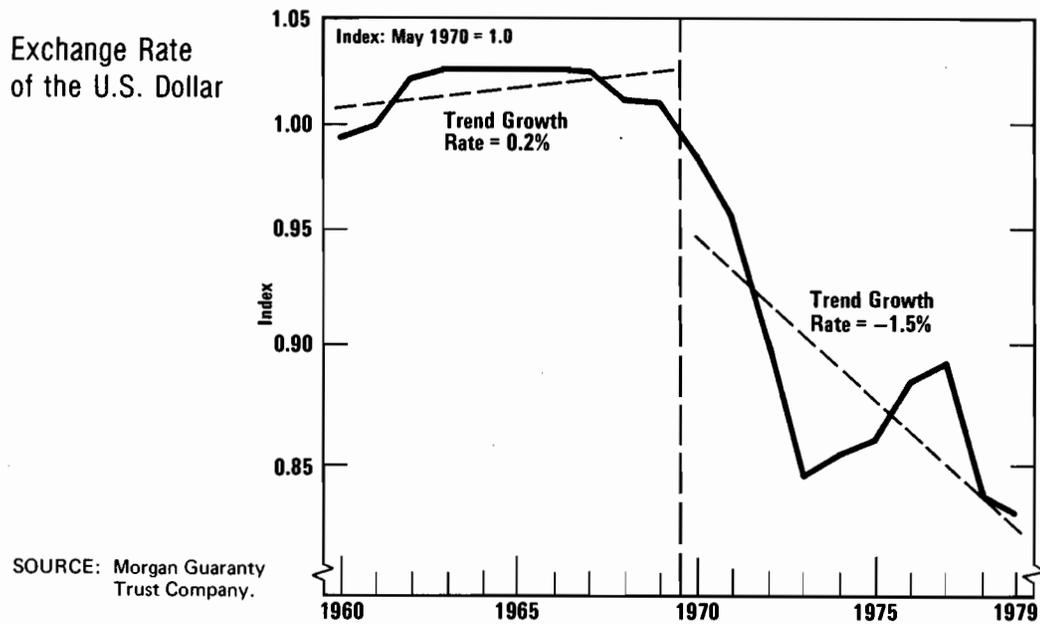
State and local government spending and revenues in 1979 reflected two important developments: deliberate moves to limit the growth of taxes and outlays, and the general slowdown in economic conditions. Inflation-adjusted purchases by state and local governments, which account for about one-eighth of real final sales, fell by 0.4 percent in 1979. Real purchases dropped sharply in the first quarter, partly because adverse weather conditions hindered construction projects, and rebounded only modestly in the following quarters (Table 16).

Nominal expenditures of state and local governments rose in 1979. This, along with a smaller increase in receipts, caused a shift from surplus to deficit in the operating budgets, which exclude trust funds, of the sector as a whole. These operating balances moved into deficit in 1979, after being in surplus by \$4.2 billion in 1978. The shift into deficit may cause state and local governments to cut back further on purchases and other spending in 1980, exerting a further dampening influence on overall economic activity.

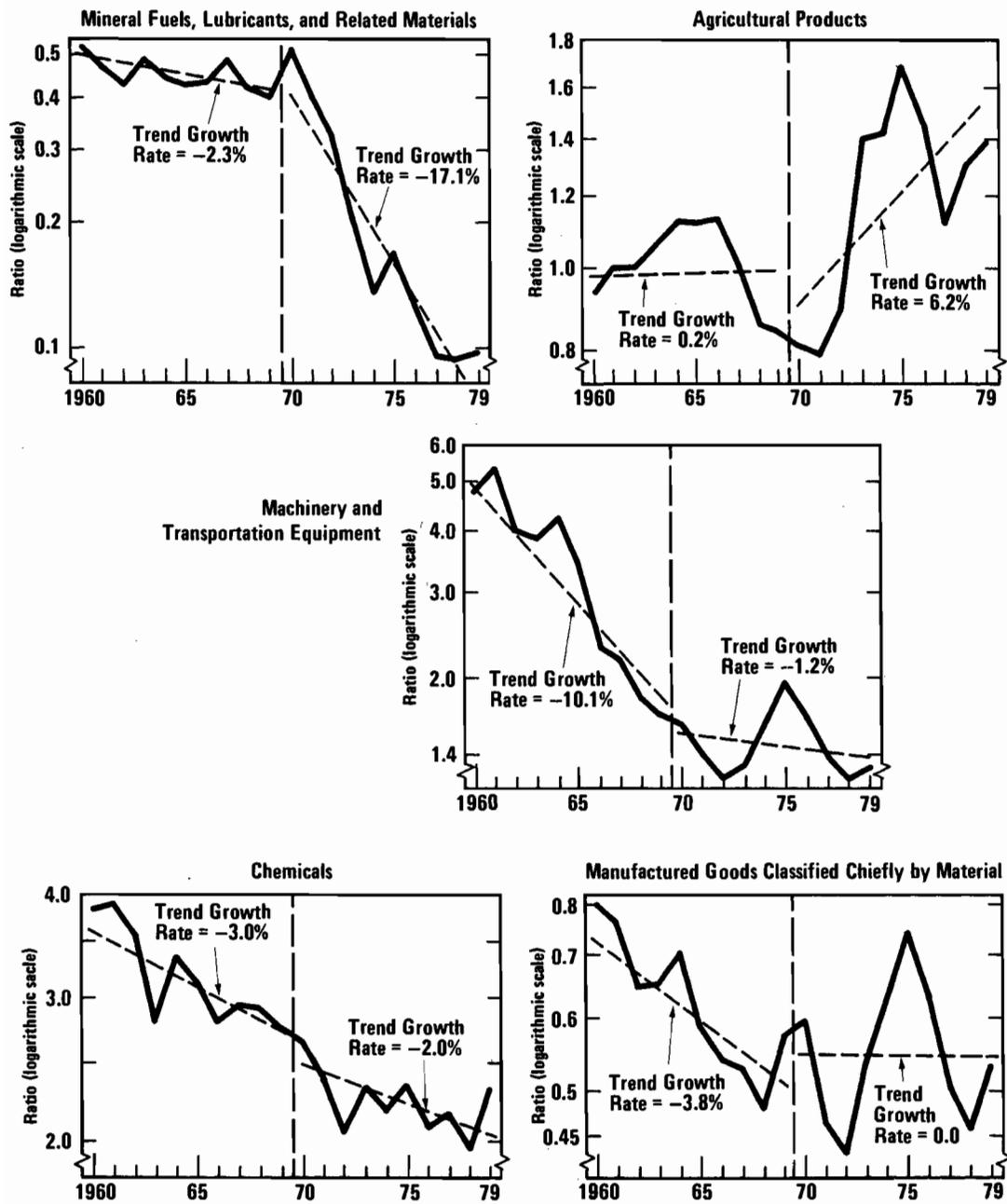
#### LABOR MARKET DEVELOPMENTS

Although the unemployment rate rose only slightly from the beginning of 1979, more significant weakening occurred in a number of other labor market indicators over the past year. After rapid

Figure 9.  
International Sector Developments, 1960-1979



# Components of Merchandise Trade: Ratio of Exports to Imports



SOURCE: U.S. Department of Commerce, Bureau of the Census.

TABLE 16. STATE AND LOCAL GOVERNMENT BUDGETS (Billions of dollars)

|                                  | 1978  | 1979:1 | 1979:2 | 1979:3 | 1979:4 |
|----------------------------------|-------|--------|--------|--------|--------|
| Purchases <u>a/</u>              | 174.6 | 173.6  | 174.3  | 175.6  | 175.9  |
| Percent Change                   | 4.0   | -6.6   | 1.6    | 3.1    | 0.6    |
| Budget Totals <u>b/</u>          |       |        |        |        |        |
| Expenditures                     | 303.6 | 316.3  | 326.1  | 334.5  | 342.8  |
| Percent change                   | 11.7  | 1.0    | 13.0   | 10.7   | 10.3   |
| Receipts                         | 331.0 | 343.9  | 343.9  | 359.8  | n.a.   |
| Percent change                   | 10.8  | 1.5    | 0      | 19.8   | n.a.   |
| Balance, Total                   | 27.4  | 27.6   | 19.7   | 25.3   | n.a.   |
| Excluding social insurance funds | 4.2   | 2.6    | -6.3   | -1.8   | n.a.   |

SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

NOTE: Percent changes are at annual rates.

a/ Billions of 1972 dollars.

b/ Billions of current dollars.

growth in the year ending in March 1979, the rise in total employment slackened (Table 17). Most of the employment growth that did occur since March was in service-producing rather than goods-producing industries. A parallel slowdown in labor-force growth prevented a more rapid rise in the unemployment rate.

Other marginal employment adjustments are occurring in response to weaker output growth. In manufacturing, the average workweek and number of overtime hours for production workers have fallen from their levels in 1978, and the number of employees working part-time for economic reasons is up. Moreover, the number of workers idled by layoffs has risen as a proportion of total unemployment as production adjustments--especially in autos--take their toll. The continued downturn in auto production, combined with the drop in residential construction, suggests that there will

be further layoffs early in 1980. And the weakness will spread, because each job in the auto and home-building industries provides an estimated 1-1/2 to 2 jobs in directly related industries.

TABLE 17. TRENDS IN LABOR-MARKET INDICATORS

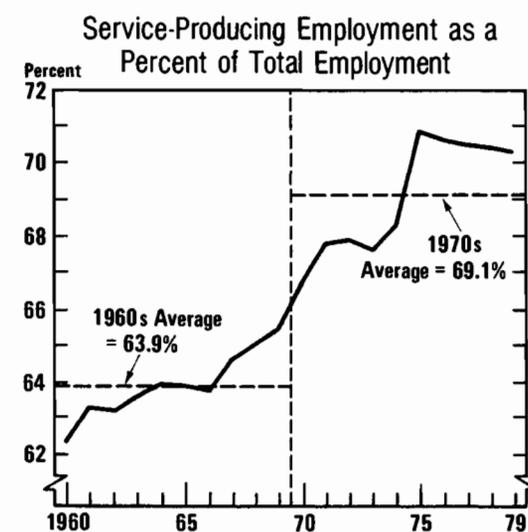
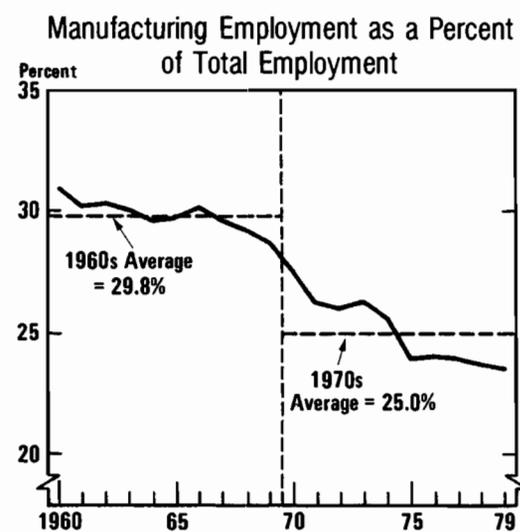
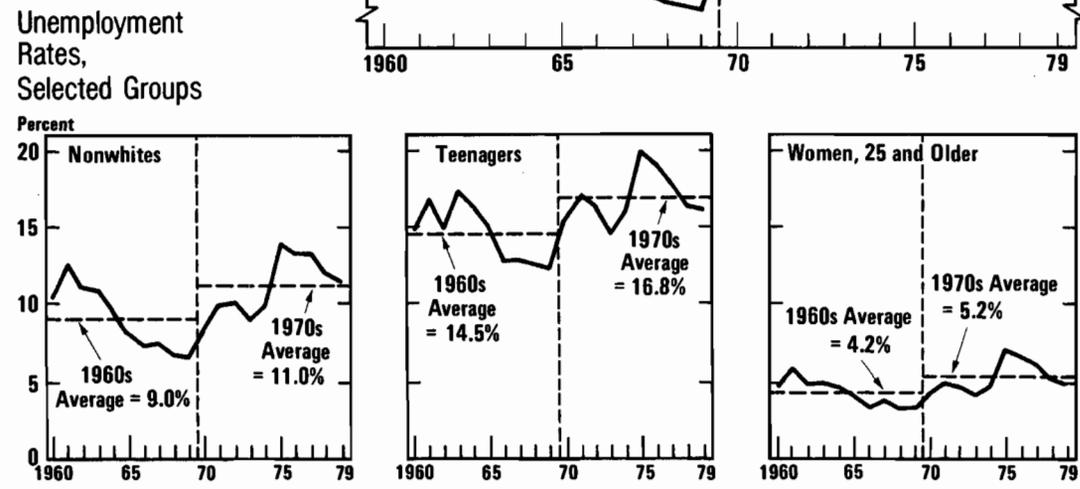
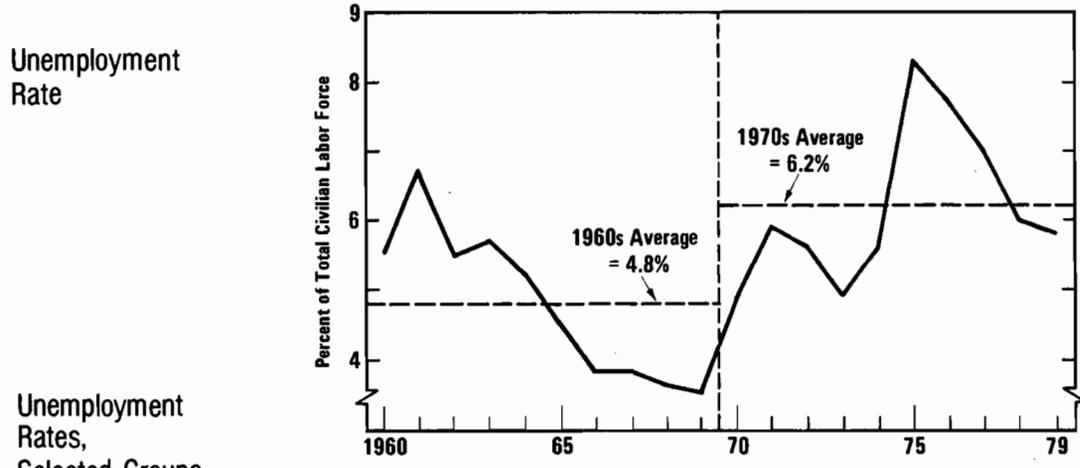
|   | 1978 |      |      |      | 1979 |      |      |      |
|---|------|------|------|------|------|------|------|------|
|   | Q1   | Q2   | Q3   | Q4   | Q1   | Q2   | Q3   | Q4   |
| Unemployment Rate<br>(percent)              | 6.2  | 6.0  | 6.0  | 5.8  | 5.7  | 5.8  | 5.8  | 5.9  |
| Growth in Civilian Labor<br>Force <u>a/</u> | 2.8  | 4.4  | 1.9  | 3.6  | 3.4  | -0.7 | 3.8  | 2.0  |
| Growth in Employment <u>a/</u>              |      |      |      |      |      |      |      |      |
| According to Household Survey               | 3.2  | 6.0  | 1.6  | 3.6  | 4.2  | -0.4 | 3.1  | 1.7  |
| According to Establishment<br>Survey        | 5.4  | 6.5  | 2.1  | 5.2  | 4.2  | 2.7  | 0.8  | 2.8  |
| Goods-producing                             | 5.9  | 9.0  | 1.8  | 8.1  | 5.5  | 0.7  | -1.2 | 1.8  |
| Service-producing                           | 5.2  | 5.4  | 2.2  | 3.9  | 3.6  | 3.5  | 1.6  | 3.2  |
| Average Weekly Hours Worked                 |      |      |      |      |      |      |      |      |
| Total Private Nonfarm                       | 35.7 | 35.9 | 35.8 | 35.8 | 35.8 | 35.5 | 35.6 | 35.7 |
| Manufacturing                               | 40.0 | 40.5 | 40.5 | 40.6 | 40.6 | 39.8 | 40.2 | 40.2 |
| Overtime hours                              | 3.6  | 3.6  | 3.5  | 3.7  | 3.7  | 3.2  | 3.2  | 3.2  |

SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

a/ Percent change from three months earlier at an annual rate.

From a longer-term point of view, the labor market displayed some new trends in the 1970s relative to the 1960s (Figure 10). Unemployment was generally higher in the 1970s, reflecting both the influx of inexperienced workers into the labor force and two recessions. The increased burden of unemployment was not distributed evenly by age, race, or sex. Finally, the industrial composition of jobs shifted dramatically. Manufacturing employment fell from 31 percent of total nonfarm establishment jobs in 1960 to below 24 percent two decades later; service-producing jobs showed an opposite trend, rising to more than 70 percent of the total.

Figure 10.  
Labor Market Trends, 1960-1979



SOURCE: U.S. Department of Labor, Bureau of Labor Statistics.

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### CHAPTER III. FISCAL AND MONETARY POLICY DEVELOPMENTS

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Federal fiscal policies now in force will, if they are maintained, contribute to the projected weakness of the U.S. economy during the next two years. In addition, the recent tightening of monetary policy--in response to record high rates of inflation and speculation against the dollar--will also contribute to the slowdown.

Under the policies the Congress adopted in its second budget resolution for fiscal year 1980, federal spending, adjusted for inflation, may be expected to grow moderately in fiscal year 1980 and to decline in the following year. Previously legislated increases in payroll taxes will tend to add to the federal tax burden over the same period. Moreover, the effect of inflation on personal and corporate income taxes will cause an increasingly large fraction of national income to be paid to the federal government.

Last October, for the second consecutive fall season, the Federal Reserve adopted much tighter monetary policies. This time the Federal Reserve accompanied the policy change with new procedures to ensure the achievement of its money aggregate targets. The new policy was designed to reduce spending growth and thereby moderate inflationary pressures. The policy seemed to be having a restrictive effect on economic activity at year-end.

There is no assurance, of course, that the present move toward less expansive fiscal and monetary policies will be maintained. For one thing, political events in the Mideast could result in increased defense spending. The Administration is also expected to propose higher outlays than would be realized under current law. At the same time, there have been a number of proposals in the Congress for tax cuts of one sort or another during the next year or two. (Alternative fiscal policies are analyzed in Chapter V.) Similarly, with respect to monetary policy, it is by no means certain that the Federal Reserve will continue to pursue restrictive policies, if unemployment rises rapidly.

## FEDERAL FISCAL POLICY

By most measures, fiscal policy was less expansive in 1979 than it had been in 1978, and the provisions of the second budget resolution for fiscal year 1980 provides little additional stimulus in the present year.

### Effective Tax Rates

Tax burdens will continue to increase in 1980 and 1981 under current legislation. In January 1980, the Social Security tax base rose from \$22,900 to \$25,900. An even larger increase in payroll taxes will occur under current law in 1981 when the combined rate (for employers and employees) will rise from 12.26 percent to 13.3 percent and the base to \$29,700. Also, some nondiscretionary changes in tax rates will occur because of cyclical movements in the economy coupled with inflation. These include an automatic increase in effective personal income tax rates arising from the interaction between the progressive tax structure and inflated income growth, and increases in business tax burdens stemming from the fact that depreciation allowances may not adequately cover capital consumption costs in this inflationary environment.

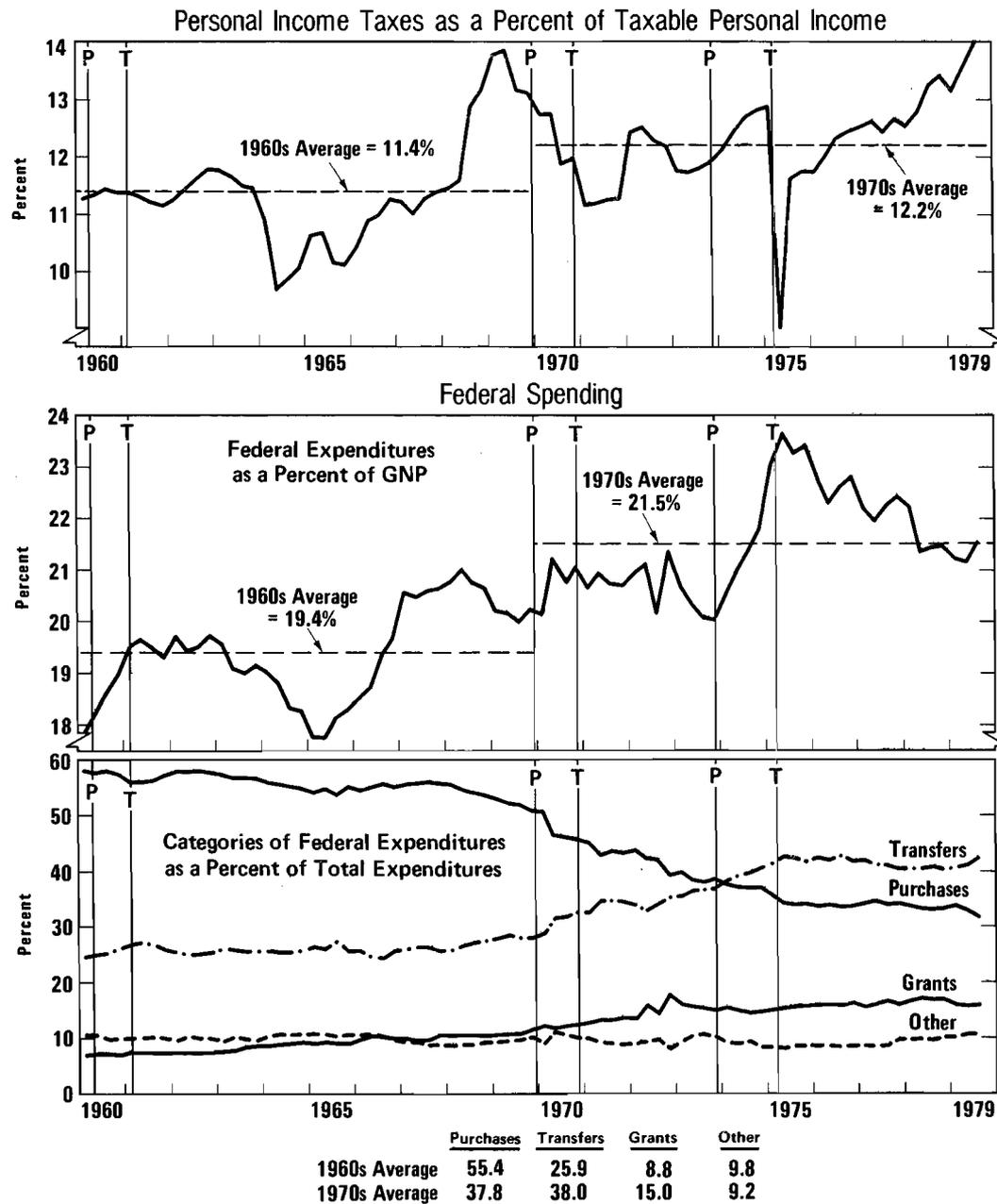
The fraction of taxable personal income that is paid to the federal government depends both on legislated tax rates and on the level of economic activity. As shown in Figure 11, this effective tax rate was very high in the late 1960s because the economy was operating at near full capacity and also because a surtax on personal income had been imposed in 1968. Because of inflation, high effective tax rates existed in 1978 and 1979, even after a tax cut in the first quarter of 1979 and even though resource utilization rates were lower than in the late 1960s. In the absence of further tax cuts, high inflation will continue to push effective tax rates upward, thereby acting as a brake on the economy.

### Growth in Spending

Federal outlays (Unified Budget basis) grew by 9.5 percent in fiscal year 1979, compared with 11.9 percent in fiscal year 1978 (Table 18). In light of the acceleration in inflation during the past year, real federal outlays were relatively flat. In fiscal year 1980, the second budget resolution enacted last fall allows for an increase in outlays of 10.9 percent. CBO now estimates,

Figure 11.

### The Federal Sector and the Economy, 1960-1979



SOURCE: U.S. Department of Commerce, Bureau of Economic Analysis.

NOTES: Latest point plotted is the third quarter of 1979. Federal expenditures are on an NIA basis. P and T represent business cycle peaks and troughs, respectively, as designated by the National Bureau of Economic Research.

TABLE 18. ACTUAL AND PROJECTED FEDERAL BUDGET TOTALS, FISCAL YEARS 1978-1981 (Billions of dollars, Unified Budget basis)

|                     |             |             | 1980                 |                         | 1981                              |
|---------------------|-------------|-------------|----------------------|-------------------------|-----------------------------------|
|                     | <u>1978</u> | <u>1979</u> | <u>2nd</u>           | <u>CBO</u>              | <u>CBO</u>                        |
|                     | Actual      | Actual      | Budget<br>Resolution | Current Law<br>Estimate | Current Law<br>Estimate <u>a/</u> |
| Receipts            | 402.0       | 465.9       | 517.8 <u>b/</u>      | 516                     | 582 <u>c/</u>                     |
| Outlays             | 450.8       | 493.7       | 547.6                | 560 <u>d/</u>           | 609                               |
| (Percent<br>change) | (11.9)      | (9.5)       | (10.9)               | (13.4)                  | (8.8)                             |
| Budget<br>Balance   | -48.8       | -27.7       | -29.8                | -44                     | -27                               |

a/ CBO's current law projection plus an assumed 7 percent federal pay raise in October 1980.

b/ Includes \$2.4 billion for a windfall profits tax. When this report was prepared, that tax had not been enacted and was not included in CBO's current law estimates.

c/ Does not include the Administration's cash management proposals.

d/ CBO's fiscal year 1980 current law estimate includes action completed to date by the Congress plus anticipated supplementals for certain entitlements such as Medicaid, and for the 7 percent federal pay raise that became effective on October 1, 1979. The CBO outlay estimate for 1980 also includes a supplemental for the food stamp program on the assumption that the Congress will lift the authorization ceiling, but does not include any other discretionary supplementals for such programs as energy and national defense.

however, that outlays will increase by more than 13 percent in fiscal year 1980 on the basis of provisions in current law. This upward revision in 1980 outlay estimates is based on projections of higher inflation, higher interest costs, smaller asset sales (negative outlays), and increased agricultural price supports resulting from the recent grain embargo.

For fiscal year 1981, the CBO current law budget forecast indicates a sharp reduction in the growth of outlays to 8.8 percent. <sup>1/</sup> The Administration's budget outlay proposal for fiscal year 1981 is expected to be about \$5 to \$10 billion above that estimate. If the Congress approves this higher level of spending, outlays in fiscal year 1981 would be more than 10 percent above the CBO current law estimate for fiscal year 1980.

The restrictive effect on the economy of an increase in effective tax rates may be offset by rising spending. Thus, the projected growth in federal outlays may partially offset the rising tax burdens described earlier. The changing composition of federal outlays may add further to the expansionary thrust of spending. Because of the projected acceleration in defense spending under current law, the growth of federal purchases is expected to be relatively strong during the next few years, perhaps reversing the trend since the late 1960s. It is generally believed that federal purchases have a larger impact, per dollar, on aggregate demand than grants and transfers, and probably none of the negative impact on aggregate supply (especially labor supply) associated with some transfer programs.

#### Changes in the Deficit

Discretionary and nondiscretionary changes in the budget have reduced the federal deficit over the past year: to \$27.7 billion in fiscal year 1979 as compared with \$48.8 billion in fiscal year 1978. The second budget resolution for fiscal year 1980 assumes that the deficit will remain in the neighborhood of \$30 billion. Revised CBO estimates of outlays and revenues for fiscal year 1980, however, project a deficit of about \$44 billion under current law.

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<sup>1/</sup> For further details, see Congressional Budget Office, Five-Year Budget Projections: Fiscal Years 1981-1985 (forthcoming).

Uncertainty about the outlook for the U.S. economy makes these budget projections extremely tentative. Higher unemployment rates tend to raise federal transfers, mainly in the form of unemployment insurance, and to lower tax revenues, thus leading to an increase in the deficit. A rise in the inflation rate will increase both federal expenditures and federal revenues; the revenue increase, however, will generally be larger, thus reducing the size of the deficit.

Because of these effects of the business cycle on the budget, the deficit can be a misleading measure of fiscal policy. One way of removing the effects of cyclical changes in the real economy is to calculate a hypothetical deficit at "full employment" (Table 19) or at "constant employment." (The choice between full employment or constant employment has a significant effect on the level of the deficit but not on the change in the deficit; the change in the balance is the better measure of the impact of the budget on aggregate demand.) The full-employment budget has

TABLE 19. FULL-EMPLOYMENT BUDGET TOTALS, FISCAL YEARS 1975-1981  
(Billions of dollars)

|  | Actuals |       |       |       |       | Current Law<br>Estimates |       |
|--|---------|-------|-------|-------|-------|--------------------------|-------|
|  | 1975    | 1976  | 1977  | 1978  | 1979  | 1980                     | 1981  |
| Full-Employment<br>Receipts              | 316.1   | 339.3 | 382.9 | 425.9 | 490.8 | 561.4                    | 652.4 |
| Full-Employment<br>Expenditures          | 319.7   | 360.9 | 402.8 | 446.8 | 491.7 | 554.4                    | 600.5 |
| Full-Employment<br>Balance               | -3.7    | -21.6 | -19.9 | -20.9 | -0.9  | 7.0                      | 51.9  |
| Change in Full-<br>Employment<br>Balance | --      | -17.9 | 1.7   | -1.0  | 20.0  | 7.9                      | 44.9  |

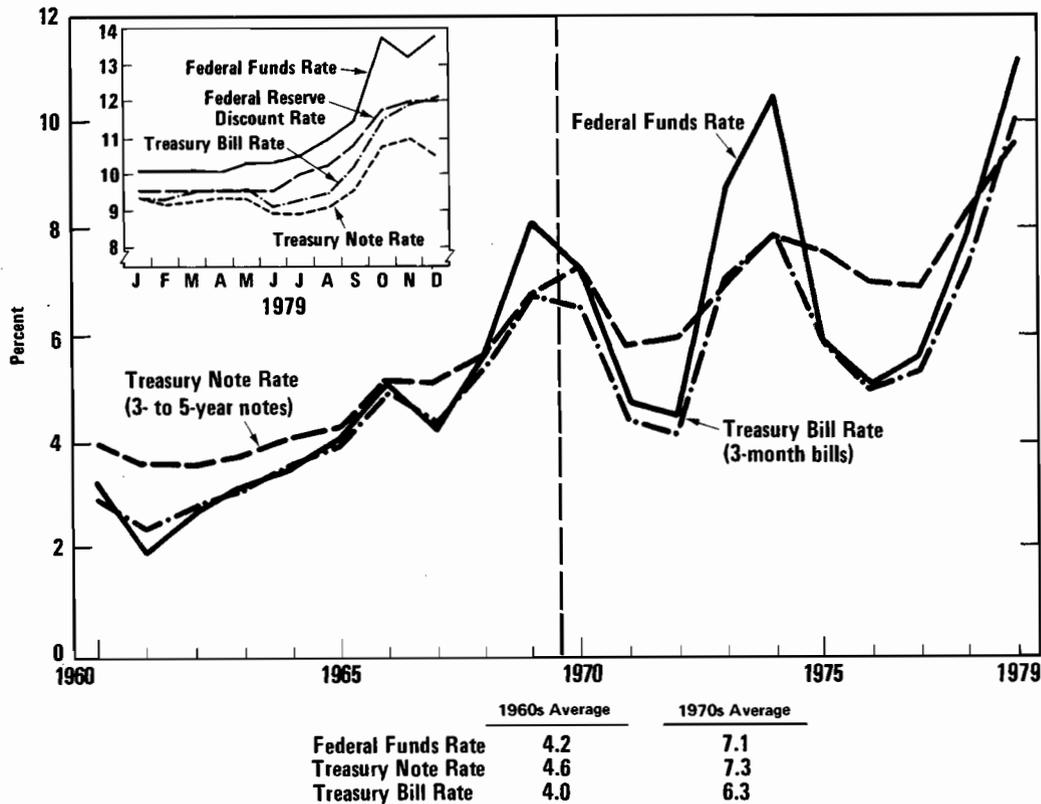
NOTE: Estimates are based on the National Income Accounts concept of the budget and assume that real potential GNP grows at an annual rate of 3 percent.

moved from a deficit of about \$20 billion in 1977 and 1978 to roughly a balance in 1979. Under current law (that is, assuming no tax cuts and no new spending initiatives), the full-employment budget is projected to show about a \$7 billion surplus in fiscal year 1980 and a sharply restrictive swing in fiscal 1981 to a surplus of about \$52 billion.

MONETARY POLICY

Recent developments in monetary policy have been dominated by the Federal Reserve measures taken in October, which raised interest rates to record levels and slowed money growth (Figure 12 and Table 20). From the four-week period ending October 10 to the period ending January 9, M1 (currency and demand deposits) grew at an annual rate of 2.2 percent, while the growth of M2 (M1 plus time and savings deposits, other than large certificates of deposit) was reduced to 6.0 percent. Interest rates peaked in late October, but on a monthly average basis remain very high at year-end.

Figure 12.  
Interest Rates, 1960-1979



SOURCE: Federal Reserve System, Board of Governors.

The Federal Reserve's policy initiative consisted of three parts:

- o A 1 percentage point increase in the discount rate;
- o An 8 percent reserve requirement on increases in some types of bank liabilities; and
- o A change in the day-to-day operating target of monetary policy.

The last change is potentially the most significant of the three.

TABLE 20. GROWTH OF M1 AND M2, 1978-1979  
(Seasonally adjusted, annual rate of change)

|        | M1   | M2   |
|--------|------|------|
| 1978:1 | 6.9  | 7.2  |
| 1978:2 | 9.5  | 8.7  |
| 1978:3 | 8.1  | 10.1 |
| 1978:4 | 4.4  | 8.8  |
| 1979:1 | -1.4 | 2.8  |
| 1979:2 | 8.4  | 9.1  |
| 1979:3 | 10.1 | 12.5 |
| 1979:4 | 5.2  | 9.2  |

SOURCE: Federal Reserve System, Board of Governors.

Although the magnitude of the discount rate adjustment was larger than anticipated, an increase had been expected. <sup>2/</sup> This anticipation was based on the Federal Reserve's demonstrated intention to keep the rate at which it lends to member banks (the discount rate) in line with other interest rates. As can be seen in Figure 12, the continued upward movement in open market rates suggested that a discount rate increase was imminent.

<sup>2/</sup> The discount rate was last increased by 1 percentage point as a part of the Federal Reserve's November 1978 measure to fight inflation and defend the dollar.

The imposition of reserve requirements on increases in large, short-term time deposits, Eurodollar borrowings, repurchase agreements, and overnight borrowings from institutions other than member banks was, perhaps, more unexpected. Reserve requirements on these "managed liabilities" raise the cost to banks of additional funds from these sources and will tend to reduce their growth.

The Federal Reserve explained:

This action is directed toward sources of funds that have been actively used by banks in recent months to finance the expansion of bank credit. Member banks are presently estimated to hold over \$240 billion in such managed liabilities. They have increased by about \$17 billion over the last three months. About half of the increase in bank credit over that period has been financed by such managed liabilities. 3/

The third measure was a decision to place "greater emphasis in day-to-day operations on the supply of bank reserves and less emphasis on confining short-term fluctuations in the federal funds rate." 4/ This was a major change in the way the Federal Reserve conducts monetary policy.

In recent years, first under House Concurrent Resolution 133 and now as mandated by the Full Employment and Balanced Growth Act of 1978 (the Humphrey-Hawkins Act), the Federal Reserve has announced in advance its target rates of growth for various measures of money. The Federal Reserve sets these targets in an attempt to control inflation and maintain high employment and economic growth. It pursues these targets by varying the rate at which it supplies reserves to the banking system--that is, through the purchase and sale of U.S. government securities in the financial markets.

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3/ Federal Reserve press release, October 6, 1979, p. 5.

4/ Ibid., p. 1. The federal funds rate is the rate that commercial banks pay to borrow short-term funds generally on an overnight basis.

Until October 6, the Federal Reserve used daily movements in interest rates as a guide in its day-to-day decisions about the quantity of reserves to be supplied. Sharp upward movements in rates, especially the federal funds rate, would usually induce the Federal Reserve to supply more reserves. When rates fell, the Federal Reserve would withdraw reserves from the banking system through sales of securities. Difficulties with this procedure arose when the banks experienced strong demand for loans. High credit demand caused interest rates to be bid up and this, coupled with the Federal Reserve's interest rate target, frequently induced the central bank to supply more reserves than was consistent with its money growth targets. Similarly, weak loan demand caused rates to fall and the Federal Reserve tended to supply fewer reserves than necessary to meet the established money targets.

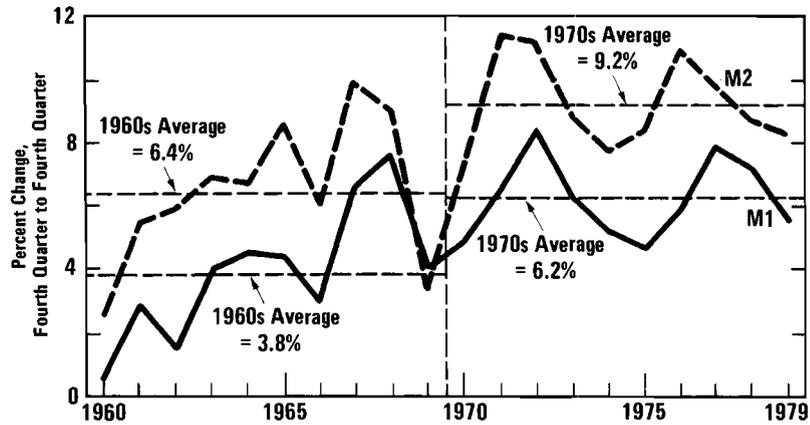
A sense of the Federal Reserve's difficulties can be obtained from Figure 13 which shows the money growth targets and actual growth rates for M1 and M2 for 1979. Both M1 and M2 were well below target in the first quarter of 1979. One reason for this was that the Federal Reserve had (beginning November 1, 1978) hiked interest rates and reduced bank reserve growth to compensate for above-target money growth earlier in 1978. By the late spring of 1979, though, credit demand and interest rates had begun to rise again and the Federal Reserve, focusing on interest rates, supplied more reserves than were consistent with its money targets. Both M1 and M2 growth accelerated, and by September were above the upper bounds of the target ranges. <sup>5/</sup> At the same time, inflation accelerated to a double-digit pace and the dollar fell in the foreign exchange markets. As had occurred in November 1978, the Federal Reserve was forced to raise interest rates sharply in a discrete step to slow growth in the monetary aggregates over the remainder of the year.

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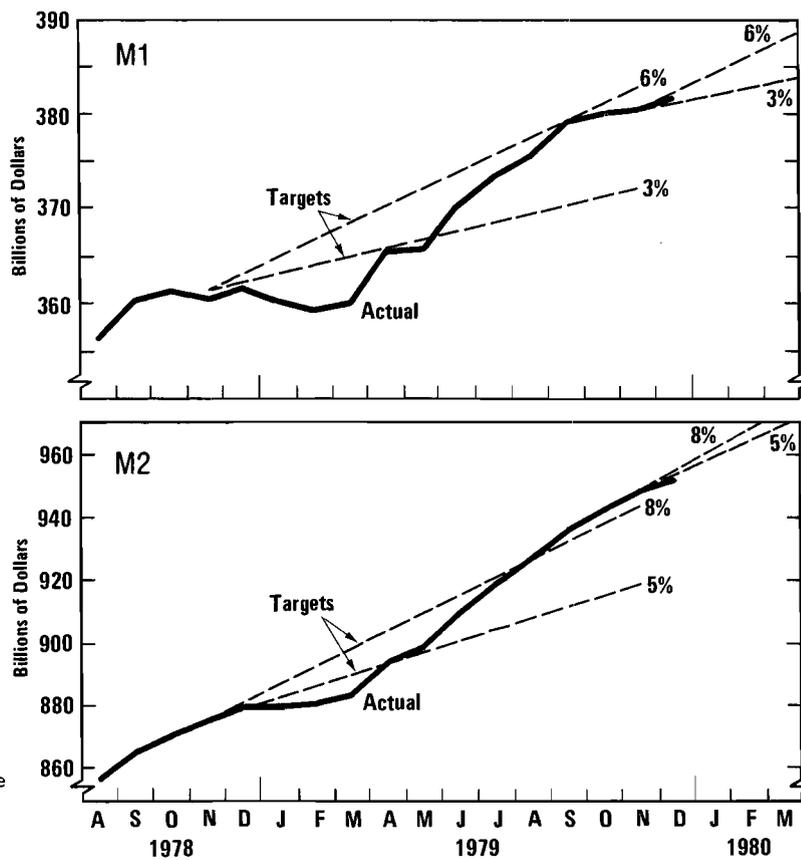
<sup>5/</sup> Initially, the target range was 1.5 to 4.5 percent for M1. However, this target was raised on October 6, 1979, to 3.0 to 6.0 percent, on the ground that close substitutes for demand deposits (automatic transfer service accounts and NOW accounts) had not grown as fast as anticipated when the targets were originally set. The target for M1 plus these substitutes was not changed.

Figure 13.  
Indicators of Monetary Policy

Money Supply  
Growth Rates,  
1960-1979



Money Supply:  
Targets and  
Actual Levels,  
1979-1980



SOURCE: Federal Reserve System, Board of Governors.

Under the new operating procedure, the Federal Reserve uses open market purchases and sales to inject or withdraw reserves on a day-to-day basis according to a reserve path thought to be consistent with the desired growth of money aggregates. This procedure may improve the Federal Reserve's ability to avoid large deviations from money growth targets. The new procedures also mean that market forces will produce larger day-to-day and week-to-week changes in interest rates. It is hoped that this will reduce the need for wrenching shifts in monetary policy such as those of November 1, 1978, and October 6, 1979. Moreover, if the Federal Reserve no longer resists interest rate declines, short-term interest rates would decline more rapidly and money growth would be steadier in a period of slow economic growth.

The Federal Reserve's change is, of course, one of degree--of giving increased weight to the supply of reserves and less weight to interest rates. Day-to-day movements in interest rates are not being ignored. High rates of inflation at home and lofty, competing interest rates abroad severely restrict the extent to which market forces or the Federal Reserve can reduce U.S. interest rates in the near term. Nonetheless, the Federal Reserve's increased emphasis on reserve growth implies that U.S. interest rates will be, at worst, unchanged and, at best, lower during economic downturns than under the old regime.

The Federal Reserve's new procedure is not without risks. Focusing on reserves may be consistent with a steadier path of money growth than observed in recent years (Figure 13). But whether steadier money growth leads to more stable economic activity and prices depends on how the demand for money behaves. If it were to decline, for example, while the Federal Reserve succeeded in keeping money growth within the target ranges, the result would be more expansive than intended. In such circumstances, the Federal Reserve would have to reduce its money aggregate targets to avoid unintended expansive effects. Thus, the new procedure may not eliminate sharp changes in policy unless careful attention is given to the selection of money aggregate targets.

The 1980 target ranges announced in July 1979 are 3 to 6 percent for M1 and 5 to 8 percent for M2, starting with the actual figures for the fourth quarter of 1979. <sup>6/</sup> In February, or

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<sup>6/</sup> Federal Reserve System, Board of Governors, Midyear Monetary Policy Report to the Congress Pursuant to the Full Employment and Balanced Growth Act of 1978, July 17, 1979, p. 41.

perhaps sooner, the Federal Reserve will either affirm or modify those targets. The CBO forecast assumes that money growth for 1980 will be near the midpoint of the tentative target ranges. Rapid inflation and adverse international pressures on the dollar are expected to constrain the Federal Reserve from permitting short-term rates to decline much in the first quarter of 1980. Beginning in the second quarter, however, rates are expected to decline steadily, with the three-month Treasury bill rate dipping below 9 percent in the last quarter of the year.



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## CHAPTER IV. THE OUTLOOK FOR 1980 AND 1981

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Most forecasters are now predicting high inflation, weak economic growth, and rising unemployment in the next year or two. The CBO projection of the economy agrees with this view. Consistent with the consensus outlook, CBO anticipates a cyclical decline in real activity concentrated largely in the first half of 1980, followed by a weak recovery in 1981. Some other forecasters expect a flat rather than a cyclical path, but the implications for inflation and unemployment over the next two years are not greatly different.

Many private forecasts assume a tax cut early next year or sooner, a factor that accounts for some differences among projections, particularly for 1981. The CBO current law forecast is based on the following policy assumptions:

- o Unified Budget outlays of \$560 billion in fiscal year 1980 and \$609 billion in fiscal year 1981;
- o No changes in tax law other than those previously legislated, such as increases in Social Security taxes in 1980 and 1981; 1/ and
- o A fairly tight monetary policy with money aggregate (M2) growth near the midpoint of the Federal Reserve's present target range over the forecast period.

The forecast, shown in Table 21, can be summarized as follows:

- o Growth in real GNP is projected to be in the -0.3 to -2.3 percent range from the fourth quarter of 1979 to the fourth quarter of 1980. During 1981, real output is expected to recover moderately, rising in the 2 to 4 percent range.

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1/ Windfall profits taxes were not included in current law when this projection was made. The windfall profits tax currently under consideration is not expected to have a significant effect on economic activity during the forecast period.

TABLE 21. ECONOMIC PROJECTIONS BASED ON CURRENT LAW, CALENDAR YEARS 1980 AND 1981

| Economic Variable                                  | Levels             |                |                | Rate of Change (percent)        |                     |                     |
|--|--------------------|----------------|----------------|---------------------------------|---------------------|---------------------|
|  | 1979:4<br>(actual) | 1980:4         | 1981:4         | 1978:4<br>to 1979:4<br>(actual) | 1979:4<br>to 1980:4 | 1980:4<br>to 1981:4 |
| GNP (billions of current dollars)                  | 2,456              | 2,596 to 2,698 | 2,860 to 3,086 | 9.9                             | 5.7 to 9.8          | 10.2 to 14.4        |
| Real GNP (billions of 1972 dollars)                | 1,438              | 1,405 to 1,434 | 1,432 to 1,490 | 0.8                             | -2.3 to -0.3        | 2.0 to 4.0          |
| General Price Index<br>(GNP deflator,<br>1972=100) | 171                | 185 to 188     | 200 to 207     | 9.0                             | 8.2 to 10.2         | 8.1 to 10.1         |
| Consumer Price Index <u>a/</u><br>(1967=100)       | 227                | 247 to 251     | 267 to 277     | 12.6                            | 8.6 to 10.6         | 8.3 to 10.3         |
| Unemployment Rate<br>(percent)                     | 5.9                | 7.2 to 8.2     | 7.5 to 8.5     | --                              | --                  | --                  |

a/ For a discussion of the patterns of the CPI, see the Appendix. Actual 1979:4 value based on a CBO estimate of December.

- o Little improvement is expected in inflation as measured by the GNP deflator, which is expected to increase between 8.2 and 10.2 percent from the fourth quarter of 1979 to the fourth quarter of 1980, and between 8.1 and 10.1 percent during 1981.
- o The rise in the Consumer Price Index (CPI) is expected to decelerate to an 8.6 to 10.6 percent range in 1980, and to an 8.3 to 10.3 percent range in 1981. The sources of differences between the GNP deflator and the CPI are discussed in the Appendix.
- o The unemployment rate is projected to rise from the current level to a 7.2 to 8.2 percent range by the end of 1980 and to hold at a high rate throughout 1981.

#### THE REASONS FOR THE DOWNTURN

The fundamental reasons for the cyclical downturn in real economic activity projected by the CBO are as follows:

- o As a result of rapid inflation in excess of wage gains, a slowdown in employment growth, and rising taxes, real disposable income has been lagging and is expected to restrict household spending in 1980;
- o Personal saving as a portion of disposable income fell to record low levels at the end of 1979 and is expected to rise somewhat in 1980, further restricting household spending; and
- o Tight credit conditions, reflected in record high interest rates and tightened standards to qualify for loans, are expected to continue to slow economic activity, especially in residential construction.

In response to lagging real income, depleted savings, and very high home mortgage costs, households are forecast to cut back their consumption and housing spending in 1980. This projection is supported by the recent deterioration in consumer sentiment to buy now, especially in housing. And, more important, the forecast is consistent with the drop in automobile and home sales that occurred toward the end of 1979.

As a result of reduced demand, there have been large layoffs in the automobile industry; these layoffs are expected to have widespread ripple effects throughout the economy. A sharp reduction in residential construction is also expected during the first half of 1980 in response to currently weak demand. Because of the slowdown in these and related industries, the unemployment rate is projected to rise, causing further consumer retrenchment. The result is likely to be a decline in total real activity early in 1980. The CBO forecast shows a mild downturn by historical standards, with a peak-to-trough reduction in GNP of about 2 percent--less than the average of the postwar recessions.

A cyclical decline is not inevitable, of course. There might be sufficient strength in export demand, business fixed investment, and state and local government expenditures to offset weakness in household spending. The federal sector also could be a source of stimulus if circumstances required a substantial increase in defense purchases, or if an early tax cut was made. Moreover, it is possible that consumers will continue to draw down liquid assets, resulting in stronger consumer outlays than projected by CBO. Thus, the outcome could be another flat year, although a decline in real output seems more likely.

The projected downturn is expected to be mild for the following reasons:

- o Strong export growth relative to imports in 1980 as U.S. economic activity weakens more than the economies of its trading partners;
- o The absence of a significant build-up in inventories in 1979, which would have to be worked down when demand falls off;
- o Some modest growth in real government expenditures; and
- o A downturn in business fixed investment that is shallow and short-lived by historical standards.

Most forecasts predict a worldwide slowdown in economic growth, partly as a result of the recent OPEC price increases, but no actual downturns are expected for most countries until possibly 1981. Consequently, the growth in U.S. exports should remain fairly strong even as the domestic demand for imports shrinks. This would provide some impetus to overall production and employment.

Both the aggregate data on inventories and the reports from the business sector suggest that inventories are fairly lean and that large-scale inventory reductions are not likely even with weaker final sales in 1980. In addition, on a current law basis, federal expenditures--particularly defense purchases--may provide a small positive thrust to the economy during 1980.

Finally, the CBO is projecting a shallow decline in business fixed investment relative to the average of previous postwar recessions. Despite reduced overall capacity utilization during the downturn, capital spending is forecast to remain brisk in many industries. Because of rapidly rising oil prices, investment in energy conservation is expected to yield good returns throughout the forecast period. In addition, investment requirements remain in the areas of pollution abatement, energy conservation, and safety.

#### THE PERSISTENCE OF INFLATION

The GNP implicit price deflator, which has recently been a more reliable measure of inflation than the CPI, is not projected to show significant improvement in 1980 and 1981. 2/ The principal factors underlying this forecast are:

- o Imported crude oil prices, despite the recent very large increases, are assumed to move up through the forecast period at a sharply decelerated rate of about 12 percent a year;
- o The forecast assumes no significant slowdown in price rises for other supply factors, such as food;
- o Labor compensation gains are expected to accelerate somewhat in response to the recent surge of inflation, although the "catch-up" will be far from complete;
- o Legislated increases in payroll taxes and the minimum wage will add an estimated 0.4 percentage point to the rate of growth in labor compensation in 1980, and 0.8 percentage point in 1981; and

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2/ The projected improvement in inflation as measured by the CPI is largely due to reduced mortgage interest rates and a slower rise in home purchase costs. The Appendix details why the CPI has been a misleading measure of inflation during this period.

- o The outlook for productivity growth over the near term remains poor.

The prospects for world oil prices are, of course, highly uncertain. The recent OPEC meeting in Caracas, Venezuela, did little to clear the air, while events in Iran and neighboring countries make the situation even more unstable. But the prospects are not all gloomy. Many analysts believe that there will be an abundance of oil on world markets early this year as world demand for oil softens along with economic growth in the industrialized countries. Nevertheless, the supply of crude is expected to be managed carefully to prevent any decline in prices. Several countries have already announced cutbacks in production for this year.

Food price inflation may improve in 1980, but only by a slight amount. The impact of the embargo on grain exports to the Soviet Union is uncertain at this time. While some price response seems likely, CBO has assumed that government actions will prevent any sizable decline in grain prices in the forecast period. The recent increases in energy prices, as well as rising labor costs, also work against a major improvement in overall food prices at retail.

Labor costs are also expected to contribute to inflationary pressures during the next two years. CBO forecasts that compensation per hour will increase at nearly double-digit rates during the projection period, largely as a result of workers' efforts to restore customary growth in real incomes and of increases in the minimum wage and in payroll taxes. Moreover, the projected weakness in productivity growth over the next two years will place further upward pressure on unit labor costs.

#### THE RECOVERY IN ECONOMIC ACTIVITY

The CBO forecasts that real output will begin rising again before the end of 1980. The recovery is projected to have the following characteristics:

- o Real disposable income is projected to begin rising after midyear, and, with it, consumer demand increases somewhat, led by the replacement purchases of durable goods that were postponed earlier;

- o Mortgage rates are forecast to decline and, consequently, spending for new housing picks up quite rapidly toward the end of 1980 and in 1981, reflecting the strong fundamental demand in this sector;
- o The business inventory correction is expected to be completed in 1980, and stocks begin rising in 1981; and
- o Business fixed investment is projected to rebound more quickly than in earlier recovery periods, in part because of continued spending to meet gas mileage requirements and pollution abatement, as well as the pressing need to replace equipment outmoded by recent rises in energy prices.

Overall, the projected recovery is weak relative to previous cyclical upswings. As indicated in Chapter III, fiscal policies under current law will exert a considerable drag on total spending in 1981 because of increased payroll taxes and inflation-induced increases in effective income tax rates.

#### THE UNCERTAINTY OF THE CBO FORECAST

The forecast period looms as a particularly uncertain time. The possibility of either a deeper recession or no recession at all cannot be ruled out. Events that could significantly change the outlook include:

- o A major interruption in the supply of crude oil to world markets or another round of large price increases;
- o A much larger cutback in consumption to rebuild depleted savings or, conversely, a pick-up in household spending fueled by further reduction of the personal saving rate;
- o A major change in the value of the dollar in international exchange markets;
- o Federal Reserve policies that differ significantly from the CBO assumptions, perhaps in response to an acceleration of inflation or to unexpected behavior of the jobless rate; and
- o A substantial increase in military spending.



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## CHAPTER V. FISCAL POLICY OPTIONS

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The economic outlook for 1980 and 1981 poses difficult problems for designing fiscal policy. How can the budget simultaneously address the problems of rising unemployment, rapid inflation, and slow productivity growth? The task is a formidable one for a number of reasons, including the following:

- o Short-term fiscal policy measures designed to maintain high employment generally work at cross-purposes with the goal of reducing the high rate of inflation.
- o Inflation caused by "supply shocks," such as OPEC oil price increases, cannot be dealt with by policies to restrict overall demand without large reductions in employment. It may be more efficient to adopt longer-term policies designed to increase the supply and/or reduce the consumption of petroleum.
- o Long-run growth targets cannot be achieved by relying solely on short-term fiscal policy measures. While tax and spending policies that help maintain high employment also tend to promote growth in investment, these measures by themselves may not be sufficient to assure the achievement of productivity goals. Satisfactory growth in productivity may require longer-run policies to divert resources from consumption to investment. Much of fiscal policy-making today boils down to a hard choice between consumption now and consumption in the future.
- o Conversely, the short-run goals of price stability and high employment cannot be achieved by sole reliance on fiscal tools designed to stimulate investment and productivity. Generally, such measures affect the economy with too long a lag to be effective for the short-run moderation of business cycles.
- o Finally, in practice, short-run fiscal policies to moderate cyclical downturns have sometimes worked against long-run growth objectives. For example, personal tax cuts and other programs designed to counteract cyclical declines in consumption spending could divert resources away from

capital formation once full employment is restored. Also, transfer programs that alleviate the hardships of unemployment may reduce work incentives. Finally, to the extent that countercyclical fiscal policies are poorly timed and lead to budget deficits after the economy has recovered, growth of the private capital stock may be retarded.

This chapter discusses the following issues: (1) alternative fiscal policy strategies; (2) short-run fiscal policies to stabilize fluctuations in overall spending, prices, and employment; (3) longer-run fiscal policies to encourage capital formation and improve productivity; (4) other strategies to improve productivity; (5) selected tax policies for dealing with the high cost of imported oil; and (6) the short-run effects of several illustrative packages of fiscal policies.

#### ALTERNATIVE FISCAL POLICY STRATEGIES

In general, federal fiscal policy has relied on tax cuts and spending increases to boost weak spending during cyclical downturns, and--to a lesser extent--on tax increases and spending cuts to reduce inflationary pressures resulting from excessive demands. Such "demand management" policies can be useful tools for moderating fluctuations in the economy. For a number of reasons, however, the record of these policies' success is mixed. Policy changes are difficult to implement in a timely fashion. Furthermore, demand management may not be an effective way of improving long-run growth, dealing with a supply shock such as an OPEC price increase, or achieving low inflation and high employment simultaneously.

In the 1974-1975 recession, for example, higher energy costs resulting from the oil embargo and from OPEC pricing actions caused prices to surge and were an important factor in the decline of real income. This development showed the limitations of policies that focus on the behavior of total spending in the economy: short-run stimulative measures to boost disposable income and total spending helped to moderate the drop in employment, but they could not simultaneously reduce inflation.

The momentum of inflation now appears to be a deep-seated problem, partly rooted in long-run factors such as slow productivity growth, rising energy costs, and the formal and informal

indexing of many wages and other incomes to past inflation in order to maintain accustomed real income growth. <sup>1/</sup> Available evidence suggests that the underlying inflationary thrust is relatively insensitive to short-lived moderate doses of fiscal restraint. If this view is correct, the cost in terms of lost production and jobs of reducing inflation solely with policies that restrict demand can be very high. An anti-inflationary fiscal policy can be made more effective by combining measures that stimulate productivity growth, policies to reduce the impact of high energy costs, and short-run policies to reduce demand pressures. A combination of policy measures may also be an efficient strategy to deal simultaneously with the problems of recession and growth: for example, short-run stimulus measures, carefully chosen to minimize the effect on inflation, could be combined with long-run growth strategies.

Because of limits on the size of the federal deficit, however, it may not be possible to undertake at the same time measures that provide sufficient stimulus to achieve a rapid cyclical recovery and measures that provide a significant boost to long-run productivity. Thus, one cost of adopting a long-run growth policy might be the acceptance of somewhat higher unemployment, for a time, than would occur with a policy emphasizing short-run stimulus. Also, a successful growth strategy may require some sacrifice in household consumption or government spending in order to ensure that sufficient resources are diverted to business investment.

#### SHORT-RUN COUNTERCYCLICAL FISCAL PROGRAMS

The fiscal policy response to a recession typically has included income tax cuts and increased outlays for reducing the hardship of unemployment. For example, the major fiscal policy responses to the 1974-1975 recession were: substantial reductions in personal and corporate income taxes, an extension of the eligibility period for unemployment insurance benefits, funding of public service employment and public works programs, and the creation of a system of countercyclical grants to states and local governments. Such tax and spending programs are intended to

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<sup>1/</sup> For an analysis of the role formal and informal indexation plays in the inflation process, see Congressional Budget Office, Inflation and Growth: The Economic Policy Dilemma (July 1978), Chapter III.

provide a short-run stimulus to aggregate demand, and help to reduce unacceptably high levels of unemployment. Business tax cuts, however, generally contribute more to long-run growth than to improved short-run stabilization, because they affect investment with a relatively long lag. In many cases, the contribution of spending programs to stabilization is also questionable, because frequently there are long delays before spending programs are fully implemented.

If countercyclical measures are to be considered in response to the projected recession, it is important to know how alternative actions would likely affect economic targets such as real output, employment, and the price level. The merits of several short-run measures are examined below.

A Personal Income Tax Cut. In the past, antirecession fiscal policies have generally included a cut in individual income taxes, intended to stimulate aggregate demand. <sup>2/</sup> Experience suggests that such tax changes can be implemented quickly after enactment. Income tax cuts are believed to provide a boost to output and employment for a period of two to three years, if enacted at a time when there is significant excess capacity. Such stimulus also tends to increase inflation, however, and this effect continues long after the impact on output has dissipated. <sup>3/</sup>

Part of the projected decline in real disposable income in the CBO forecast stems from an inflation-induced rise in personal

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<sup>2/</sup> Cuts in marginal income tax rates may also stimulate aggregate supply by increasing work incentives. In recent years, some economists have asserted that the labor supply effects of lower marginal rates are very large and very quick, so much so that personal income tax cuts "pay for themselves" (that is, there is no revenue loss) and do not generate excess demand inflation. However, extensive empirical study of supply effects has not produced evidence of such large effects on aggregate supply. See, for example, Congressional Budget Office, An Analysis of the Roth-Kemp Tax Cut Proposal (October 1978), Chapter II.

<sup>3/</sup> For an elaboration of this point, see Congressional Budget Office, Understanding Fiscal Policy (April 1978), pp. 14-18.

income taxes resulting from the interaction of the progressive rate structure and rising nominal incomes. If the Congress desired to offset this impact of inflation on personal income taxes, it could adjust the level and width of the income tax brackets and increase the value of personal exemptions by corresponding amounts. For example, the rise in effective rates resulting from a 10 percent increase in prices and nominal incomes could be offset by raising and widening the income tax brackets by 10 percent, and by raising the \$1,000 personal exemption to \$1,100. The revenue cost of offsetting the impact of inflation on tax rates in 1980 would be about \$10 billion.

A Reduction in Payroll Taxes. One fiscal stimulus option that might actually help to reduce the high rate of inflation is a payroll tax cut. Changes in payroll taxes can be implemented quickly, and the impact on output and employment appears to be quite similar to changes in personal income taxes. But whereas an income tax cut may be inflationary through its impact on aggregate demand, a payroll tax cut is likely to reduce prices slightly. The employers' contribution for Social Security is a business cost. A reduction in this cost is generally thought, to a large extent, to be passed forward to consumers through lower prices, and, to a lesser extent, passed backward to workers through higher pay increases. Studies of the incidence of payroll taxes have provided varying estimates of the extent to which such taxes are shifted forward, so the quantitative impact on inflation from a cut in payroll taxes is not certain. 4/

In 1981, the tax base for Social Security taxes is to be raised from \$25,900 to \$29,700, and the contribution rates for employers and employees are to increase from 6.13 percent to 6.65 percent. Thus, if economic stimulus is desired, one component of a fiscal package could be a postponement of the scheduled base and rate increases. This action would reduce revenues by about \$16 billion in calendar year 1981. The decline in employer-paid taxes would result in a one-time reduction of price levels, partially offset by the upward pressure on prices resulting from the reduction of employee-paid taxes and from the possible effects on employees' pay.

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4/ Estimates of the impact of a payroll tax change are discussed in see Congressional Budget Office, Aggregate Economic Effects of Changes in Social Security Taxes (August 1978), pp. 29-30.

A payroll tax cut would have to be offset by increases in other revenues if Social Security benefit levels were to be maintained. 5/

Countercyclical Revenue Sharing. During recessions, the budgets of states and local governments (excluding social insurance trust funds) generally deteriorate as revenues drop in response to declining employment and incomes. Moreover, the effects of recessions typically differ significantly from one geographical region to another. Since most states must attempt to balance their current budgets, recession-induced deficits lead to budget actions that may intensify recessions and make the task of federal fiscal policy more difficult. Countercyclical revenue sharing can assist state and local governments in maintaining existing levels of public services despite declines in their tax collections.

The countercyclical revenue sharing program authorized by the Anti-Recession Fiscal Assistance Act of 1976 (ARFA) was terminated at the end of fiscal year 1978. The Congress is now considering similar legislation. The Senate has passed a bill (S. 566) that would provide funds in calendar quarters when the national unemployment rate is 6.5 percent or higher. The bill authorizes \$125 million plus \$30 million for each tenth of a percentage point that unemployment exceeds 6.5 percent. The House is considering a program (H.R. 5980) that would be triggered after a two-quarter decline in real wages and salaries that is accompanied by a two-quarter decline in real GNP. For each such quarter, the House bill would allocate \$15 million for each tenth of a percentage point decline in real wages and salaries.

While programs such as those now being considered by the Congress and the old ARFA program can reduce the impact of recessions on state and local government budgets, their effectiveness as antirecession tools is questionable for at least two reasons. First, there is a time lag between quarters of decline in income and economic activity and the actual distribution of program funds. This lag prevents governments from receiving the funds during

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5/ One proposal (H.R. 4990) would avoid the problems caused by reduced funding by granting an income tax credit for payroll taxes paid.

periods when their economies may benefit most from stimulus. Second, there may be a considerable lag between the time program funds are required by governments and the time they actually enter the spending stream, either through increased government expenditures or through lower state and local taxes.

Studies of the uses of funds under the old ARFA program have concluded that, even after several quarters, most of the funds remained in government budget surpluses. Most state and local governments do not now have budget surpluses (excluding trust funds) as they did when ARFA was in effect. Nevertheless, experience with that program suggests that funds from a new round of countercyclical revenue sharing probably would be used mainly to offset revenue shortfalls rather than to increase state and local spending, particularly in view of the sentiment to reduce the size of state and local budgets as reflected in Proposition 13. Of course, the impact on the economy would still be expansive if revenue sharing helped maintain existing spending levels or generated state and local government tax cuts.

Public Service Employment Programs. An increasingly important antirecession measure during the 1970s was public service employment (PSE), financed through special grants to support jobs for certain population groups in the public and private nonprofit sectors. Supporters of these programs assert that the major advantages of PSE programs are: first, that they can generate more employment per dollar of expenditure than other types of fiscal stimulus; and second, that they can be directed at disadvantaged groups most severely affected by recession. Critics contend that the effectiveness of the programs has been limited by "fiscal substitution"--that is, the use of federal dollars merely to support services that would have been provided anyway. They also question whether the disadvantaged have been the primary beneficiaries, and call attention to the fact that in the past the programs continued even after the economy recovered.

Past experience with public service employment programs indicates that the number of jobs can be expanded quite rapidly if regulations and targeting are not too cumbersome. For example, the number of PSE jobs was increased from approximately 290,000 in early 1977 to 730,000 in early 1978, a gain of about 440,000 in one year. This rapid gain, however, may have been achieved at some sacrifice through less strict adherence to regulations and through higher fiscal substitution.

In the 1978 reauthorization of the Comprehensive Employment and Training Act, several changes were made in the countercyclical PSE program to improve targeting and to reduce fiscal substitution. These modifications may reduce the extent of fiscal substitution but they may also reduce the flexibility of the program as a countercyclical tool by increasing the time required to expand the program.

Countercyclical Local Public Works. With sufficient prior planning it may be possible for local public works (LPW) programs to be an effective antirecession device. Without such planning it is very difficult for LPW programs to create jobs and increase incomes in a timely fashion in those geographic areas and sectors of the economy that are suffering from slack demand. Public works programs are generally thought to have greater effects on output and employment than do changes in taxes and transfer payments. But since a public works program is financed through grants to state and local governments, fiscal substitution could significantly weaken its impact as a countercyclical tool.

If there is a relatively mild and short downturn, any LPW program should stress projects that can be completed rapidly. The recent LPW program, by comparison with such programs in the past, was found to be relatively effective at spending money rapidly--about 90 percent of the funds appropriated for the second round were disbursed within two years. It would be difficult, however, to concentrate the stimulative impact of an LPW program on briefer periods of economic decline or early recovery. 6/

The use of a countercyclical LPW program would require reauthorizing legislation. The National Public Works and Economic Development Act of 1979 (H.R. 2063) passed by the House of Representatives contained \$2 billion in reauthorization for a standby countercyclical LPW program. The Senate version, however, did not include a countercyclical LPW program.

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6/ For a recent analysis of the LPW program, see Office of Management and Budget, Public Works as Countercyclical Assistance, November 1979. Among other conclusions, the OMB report states: "A national countercyclical public works program cannot be triggered and targeted to cyclically distressed areas in a timely manner to compensate for cyclical fluctuations in unemployment and aggregate economic activity." (p. ii).

Extended Unemployment Insurance Benefits. Extending the usual period of eligibility under the unemployment insurance (UI) system is another antirecession tool, used in most recessions since the mid-1950s. Increases in outlays for this program are thought to have about the same impact on real GNP and employment as a cut in the personal income tax of the same amount. Since the UI system is already in place, this approach can be implemented quickly and on a large scale. In addition, if the recession lasts a long time, extending UI benefits is one way of mitigating hardship. On the other hand, the prolonged availability of UI benefits may, to some extent, inhibit serious job search. One possibility is to make training available to persons who are receiving UI benefits and are unable to find a job after a certain period of time. This approach, if successful, could have longer-run advantages by adding to workers' skills.

Training. Ordinarily, training programs are considered to be long-term measures aimed at serious skill deficiencies. Some countries, however, such as France and Sweden, have tended to rely on training, particularly for youths, as a countercyclical as well as a structural tool. These efforts have involved both institutional training and subsidized on-the-job training. A drawback of the approach is that it may take quite a while before the training is organized and participants have completed a significant amount of training. Also, it may be difficult to know what to train people for, and not easy for them to find jobs if the labor market is still slack when the training is completed.

Other Spending Programs. Increased spending for other functions, such as national defense, can have a substantial impact on economic activity. It is very difficult to time changes in such spending so as to improve economic stabilization. To do so, moreover, may be an inefficient use of resources and contrary to program objectives.

#### ECONOMIC GROWTH STRATEGIES: THE CAPITAL FORMATION APPROACH

Incentives for capital formation could be one element of a policy to stimulate productivity and economic growth. Although there is some debate about the size of investment responses to capital subsidies, there is general agreement that investment incentives promote long-run capital accumulation. High rates of capacity utilization also encourage investment, but investment incentives are thought to be more effective in raising the long-run

capital intensity of production, because they help to divert resources from consumption to investment. Moreover, in contrast to general demand stimuli, some investment subsidies can be designed to address specifically the adverse impact of inflation on investment that results because tax allowances for depreciation may not fully account for the rise in replacement, or capital consumption, costs. This may have been an important factor in the slowdown in capital formation during the past decade.

### Saving and Investment

In the absence of sufficient sources of foreign financing, the long-run effectiveness of investment incentives depends on the extent to which the national rate of saving at full employment can be increased. <sup>7/</sup> A higher saving rate (that is, a smaller proportion of income consumed) is necessary if a greater fraction of potential output is to be devoted to capital formation. If the saving rate does not rise, investment subsidies will tend to reallocate investment rather than to increase its overall level.

During periods of full employment, the national rate of saving can be increased by lowering federal deficits (increasing surpluses). At high levels of resource utilization, deficits absorb private saving that otherwise could be used to finance private investment. Conversely, budget surpluses can be used to retire federal debt and increase the funds available for private business borrowing during periods of full employment.

Another way to increase the national saving rate is to reduce business taxes that affect the size of retained earnings, one form of national saving. Finally, proposals to raise the national saving rate have included suggestions to increase personal saving: either by replacing all or part of the individual income tax with a consumption-type tax (such as the value-added tax) that removes savings from taxable income, or by making the earnings from financial savings tax-exempt. There is considerable debate, however, about the responsiveness of the personal saving rate to changes in the after-tax rate of return on savings.

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<sup>7/</sup> National saving includes personal saving, business saving (retained earnings and capital consumption allowances), and government surpluses. The rate of saving in this discussion is the ratio of national saving to GNP.

The form of individual savings can affect the relation between investment and productivity. Many persons save by investing both in homes and in financial assets. Some economists have concluded that the tax structure now favors investment in owner-occupied housing rather than in other assets, thus diverting savings away from productivity-enhancing investment. 8/

#### Tax Incentives For Investment

A variety of investment tax incentives can be used to stimulate capital formation. These include: reductions in corporate tax rates, modifications of the investment tax credit, indexing of depreciation deductions for inflation, and accelerated depreciation in the form of shorter depreciation periods. While all these tax changes tend to stimulate investment by reducing the cost of capital, their impact on different forms of investment can vary. This is an important consideration, because the productivity gains resulting from policies that stimulate capital formation will not be maximized if the policies divert some capital resources away from their most productive uses. Such an outcome could result if subsidies artificially raise the profitability of some investments relative to others that are more productive. In some cases, there may be good reasons to alter the composition of investment; however, the biases that result from investment subsidies should be intentional rather than inadvertent.

A flat-rate investment tax credit of the type now available for most equipment purchases lowers the cost of capital proportionately more for short-lived assets than for long-lived assets. 9/ Thus, it stimulates investment in industries such

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8/ The impact of the current tax structure on the returns to housing is examined in Frank deLeeuw and Larry Ozanne, Investment in Housing and the Federal Income Tax, paper prepared for the Brookings Conference on Economic Effects of Federal Taxes (October 18-19, 1979; processed).

9/ The reason is that, under current law, the basis for depreciating an asset is not reduced by the value of the credit. This lack of a "basis adjustment" favors assets that depreciate quickly.

as construction and motor vehicle manufacturing, which are heavy users of short-lived equipment, relative to industries such as primary metals, communications, and utilities, which use longer-lived equipment. Also, the current investment tax credit favors investment in equipment rather than in structures since the latter do not qualify for the credit. 10/

The corporate income tax also tends to influence investment decisions. It is biased against corporations relative to unincorporated businesses, and it favors debt financing over equity financing. The main reasons for these results are that corporate income is subject to "double taxation" (once at the corporate level and again at the stockholder level when paid out in dividends), and that interest costs are deductible whereas dividend payments are not.

The Capital Cost Recovery Act of 1979. A prominent proposal for using accelerated depreciation to stimulate investment is the Capital Cost Recovery Act of 1979 (the "10-5-3" depreciation system). 11/ This proposal would establish three periods for depreciating assets: 10 years for nonresidential business structures; 12/ 5 years for equipment; and, at the taxpayer's option,

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10/ The distorting effects of the investment tax credit, however, may be somewhat moderated by failure to index depreciation allowances for inflation, which tends to penalize short-lived assets more than assets with long useful lives. In total, however, it appears that the investment tax credit may have more than offset the adverse impact of inflation on equipment investment. The impact of inflation and tax subsidies on the rate of return to various assets is analyzed in: Jane G. Gravelle, The Capital Cost Recovery System and the Corporate Income Tax, Congressional Research Service, Report No. 79-230E (November 26, 1979).

11/ Introduced as H.R. 4646 in the House and as S. 1435 in the Senate.

12/ The tax treatment of residential structures would not be changed from current law.

3 years for the first \$100,000 of autos and light trucks. <sup>13/</sup> In addition, the 10 percent investment tax credit now available in full only for equipment with useful lives of at least 7 years would be extended to all equipment. <sup>14/</sup> However, autos and light trucks that are depreciated over 3 years would be limited to a 6 percent tax credit. <sup>15/</sup> Finally, the proposal would generally liberalize depreciation formulas.

A Data Resources, Inc., (DRI) study simulating the macro-economic impacts of the Capital Cost Recovery Act of 1979 estimates that in 1980-1984 the average annual level of real business fixed investment would be raised by \$10 billion. <sup>16/</sup> During

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<sup>13/</sup> Under current law, various classes of assets are depreciated over different periods and at different rates. For example, the average "best allowable" depreciation period is 3.5 years for autos and light trucks, 10.2 years for other equipment, and 32.6 years for nonresidential structures. Equipment can be depreciated under accelerated methods such as sum-of-the-years digits and double-declining balance, while nonresidential structures are limited to 150 percent declining balance.

<sup>14/</sup> Currently, equipment with useful lives of at least 5 years but less than 7 years is limited to a 6-2/3 percent credit, while equipment with useful lives of 3 to 5 years is restricted to a 3-1/3 percent credit. Shorter-lived equipment is not eligible for a credit.

<sup>15/</sup> Under the Asset Depreciation Range (ADR) system, the useful lives of autos range from 2-1/2 to 3-1/2 years, whereas the useful lives of light trucks range from 3 to 5 years. Some of these assets thus receive no credit at all under current law, while others receive a credit of 3-1/3 percent or 6-2/3 percent.

<sup>16/</sup> "Economic Impacts of Accelerated Capital Cost Recovery," speech by Allen Sinai of Data Resources, Inc., before the Committee for Effective Capital Recovery (September 13, 1979). This study assumes that the benefits for structures are phased in over a 10-year period, while the benefits for equipment are phased in over 5 years. The simulations also assume that the Federal Reserve pursues an accommodative monetary policy that prevents interest rates from rising.

this period, the average annual growth in real GNP would be raised by about 0.3 percent. The average annual growth in productivity would be increased by about 0.7 percent, an estimate that appears unreasonably high. 17/

The Congressional Research Service (CRS) has also estimated the macroeconomic effects of the Capital Cost Recovery Act of 1979. 18/ The CRS simulation study used a more recent version of the DRI model than was used in the DRI study, and assumed that the 10-5-3 proposal would be fully phased in by 1984--as provided in the proposed legislation. Also, in contrast to the DRI study, monetary policy was not assumed to be accommodative.

According to the CRS simulation, the 10-5-3 proposal would increase real fixed nonresidential investment by an average annual amount of \$5.9 billion during the 1980-1984 period, and by an average of \$7.6 billion from 1980 to 1990. The average annual levels of real investment in producers' durable equipment and nonresidential structures would be increased, respectively, by 4.0 percent and 4.4 percent in 1980-1990. During this 11-year period, the level of productivity would be 0.6 percent higher on average,

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17/ The DRI study implies that productivity gains from the 10-5-3 proposal would be more than double the gains in real GNP. During the 1948-1978 period, there were only eight years in which productivity growth exceeded growth in real GNP, and in four of these years real GNP declined. In the four other years--1949, 1957, 1961, and 1971--the growth in productivity (output per worker hour in the private business sector) averaged 38 percent more than the growth in real GNP. Only in 1949 was the growth in productivity more than twice as much as the growth in real GNP.

Qualitatively similar findings hold for the relation between productivity growth and investment. The DRI study implies that the 10-5-3 proposal would raise productivity growth more than the growth of real nonresidential investment. Only twice in the 1948-1978 period, excluding years in which real investment declined, has productivity growth exceeded that of investment.

18/ Jane G. Gravelle and Everson W. Hully, Macroeconomic Impact of the Capital Cost Recovery Act, Congressional Research Service (November 2, 1979).

reflected in an average \$21.3 billion or 1.2 percent higher annual level of real GNP.

While the CRS simulation results appear reasonable, they nevertheless are subject to the uncertainty that accompanies any macroeconomic simulation, especially because of the size of the tax change and the long period of simulation. Moreover, neither the CRS study nor the DRI study takes into account the distinct possibility that a phasing-in of the 10-5-3 proposal over several years could result in some postponement of investment as businesses waited for the arrival of larger tax benefits. If this were to happen, the short-run benefits of the plan could be reduced. In fact, for a few years the level of investment could be depressed below what it otherwise would have been. Once the program was fully phased in, however, there could be a surge of investment, reflecting purchases that had previously been postponed.

The Capital Cost Recovery Act of 1979 would reduce the cost of capital more for some assets than for others, and thus would alter the composition of investment. <sup>19/</sup> Nonresidential fixed investment would rise relative to residential investment. Moreover, the 10-5-3 plan would tend to stimulate investment in business structures relative to equipment; within the equipment category, it generally would slant investment toward long-lived assets. Some have concluded, however, that the 10-5-3 proposal would result in a less efficient allocation of capital resources, despite the relative shift away from currently favored investment in short-lived equipment. <sup>20/</sup> Moreover, because the proposal does not directly relate depreciation deductions to the rate of inflation, the tax distortions among industries with assets that differ in durability would remain sensitive to the rate of inflation.

Alternative Approaches to Capital Cost Recovery. One alternative to the Capital Cost Recovery Act of 1979 would be to index

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<sup>19/</sup> The extent to which the composition of investment is affected depends on the relative sensitivity of the demand for different types of assets.

<sup>20/</sup> For a discussion of this point, see Alan J. Auerbach and Dale W. Jorgenson, "The First Year Capital Recovery System," presented at hearings before the House Ways and Means Committee, November 14, 1979.

directly depreciation deductions for inflation. A simplified version of indexation would not necessarily be difficult to administer. Indexing depreciation, however, would magnify the existing bias of the investment tax credit in favor of short-lived equipment, unless the credit were repealed or transformed into a credit with a basis adjustment for depreciation that was made available to structures as well as to equipment. Moreover, to reduce current distortions between debt-financed and equity-financed investment, indexing of depreciation deductions should be accompanied by an inflation adjustment for net interest payments and capital gains. Comprehensive indexing of this nature might pose difficult administrative problems.

Other ways to stimulate capital formation would be to lower tax rates on corporate profits and to further accelerate depreciation deductions by proportionately reducing depreciation periods for both equipment and structures. <sup>21/</sup> In 1979, the maximum tax rate on corporate income was reduced from 48 percent to 46 percent. In 1971, the Asset Depreciation Range (ADR) system was established, with a provision that businesses could use depreciation lives that were as much as 20 percent shorter than the ADR class lives.

In general, a corporate tax rate cut is thought to be a less effective investment incentive than accelerated depreciation, because a rate cut lowers taxes on the returns to existing as well as to new capital investments. From the standpoint of tax neutrality, a cut in corporate tax rates would reduce both the existing distortion between corporate and noncorporate investment and the bias in favor of corporate debt financing over corporate equity financing. A corporate tax rate reduction, however, would not be especially effective in dealing with the impact of inflation on capital consumption costs.

A proportionate reduction in the depreciation periods for plant and equipment might be a more efficient way to stimulate

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<sup>21/</sup> The Tax Restructuring Act of 1979, H.R. 5665, introduced by Chairman Ullman of the House Ways and Means Committee, would lower the maximum corporate tax rate to 36 percent. Among other changes, the bill would increase to 40 percent the allowed variance from ADR class lives used for calculating depreciation deductions. Currently a 20 percent variance is permitted.

investment in the long run, since this type of incentive does not lower taxes on the returns to existing capital. Compared with an increase in the current investment tax credit, a proportionate shortening of depreciation lives for plant and equipment would result in smaller distortions between short- and long-lived equipment and between equipment and structures. As in the case of the proposed Capital Cost Recovery Act of 1979, however, a proportionate shortening of depreciation lives is a crude adjustment for inflation that would be too generous when inflation rates were very low and possibly inadequate during periods of rapid inflation. 22/

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22/ Another approach to the problem of adjusting depreciation deductions for inflation is the First Year Capital Recovery System proposed by Alan J. Auerbach and Dale W. Jorgenson at hearings before the Subcommittee on Taxation and Debt Management of the Senate Finance Committee, October 22, 1979. Under this plan, businesses would be given the entire depreciation deduction for each asset in the year it is purchased. The amount of the deduction would be reduced or discounted, however, to reflect the fact that the deductions in the earlier years of an asset's life are more valuable to the taxpayer than those taken in later years. The total deduction in the first year would thus be less than the sum of the deductions that would be taken over a number of years under the present system. This system of discounting also would provide different first-year deductions for assets with different useful lives, with longer-lived assets receiving lower first-year deductions. This law, as proposed, would replace both the current depreciation system and the investment tax credit.

The benefit of this approach is that the incentives it would provide to different forms of investment would not depend on the rate of inflation. Thus, it would reduce the biases of the existing structure of investment incentives, and would make the allocation of capital more productive.

A major drawback of the First Year Capital Recovery System is that for several years it would have a large impact on the budget deficit because it "front loads" all deductions for an investment into the first year. Moreover, because the proposal calls for repeal of the investment tax credit, it could discourage equipment investment in some cases.

Changes in these different investment incentives also have different revenue loss patterns over time. An increase in the investment tax credit shows up in full in the first year, and thereafter tends to reflect the pattern of equipment investment. A reduction in the corporate tax rate simply reflects corporate profit levels. An increase in depreciation deductions, if it applies only to new investment, will result in rapidly growing revenue losses for several years, but the loss will decline and then stabilize in later years at levels roughly proportional to investment. The early-year revenue losses are not as concentrated in the first year or two as are those from changes in the investment tax credit, however. These differences in the pattern of revenue losses have an impact on measures of cost effectiveness, and may be an important budgetary consideration when evaluating alternative forms of investment incentives. In general, accelerated depreciation is less cost effective in the short run than in the long run, whereas the cost effectiveness of changes in corporate tax rates and tax credits varies less over time.

#### OTHER ECONOMIC GROWTH STRATEGIES

In addition to increased capital formation, other strategies for improving productivity and economic growth include:

- o Increasing incentives to work;
- o Encouraging discovery and innovation;
- o Stimulating investments in human capital;
- o Reducing and modifying government regulation; and
- o Promoting competition in product and labor markets.

#### Incentives to Work

One way to increase the supply of goods and services is to provide additional incentives to work. The most direct way that the government might carry out this policy is to reduce existing work disincentives. This approach could include a lowering of marginal tax rates on earned income as well as a restructuring of income transfer programs that now penalize work.

Some policies might stimulate labor supply by increasing the quantity of labor while others might enhance the quality or intensity of work effort. In some situations, an increase in the quantity of labor supplied could result in lower labor productivity as it is currently measured, although it would tend to increase the overall level of GNP.

The empirical evidence on the quantitative relationship between the supply of labor and after-tax wage rates suggests that, in general, adult males do not vary the quantity of labor supplied significantly in response to variations in net wages. <sup>23/</sup> On the other hand, the amount of labor supplied by married women does seem to increase significantly in response to increases in after-tax wage rates, although the magnitude is uncertain.

The intensity of work effort and willingness to undergo training or accept responsibility are also important dimensions of labor supply that might be influenced by tax policy, but there is little evidence on this issue.

Another way that work effort might be increased would be through restructuring incentives in the work place, although it is not clear that government policies could play a major role in this area except in government employment. Perhaps the federal government could serve as a catalyst--for example, by providing information to labor and management. There have been a number of experiments which suggest that giving workers a role in decision-making or an explicit share in profits may increase labor productivity. <sup>24/</sup> "Productivity bargaining" between labor and management is a related approach that might contribute to productivity gains. In productivity bargaining, employers sometimes grant

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<sup>23/</sup> Some limited evidence suggests that adult males at both extremes of the income scale, if faced with very high marginal tax rates, may respond by curtailing hours worked. For a review of the literature on the relationship between taxation and labor supply see Congressional Budget Office, An Analysis of the Roth-Kemp Tax Cut Proposal (October 1978).

<sup>24/</sup> For a review of several of these approaches, see National Center for Productivity and Quality of Working Life, Recent Incentives in Labor-Management Cooperation (1976).

higher wages in exchange for modifications in work rules that tend to depress productivity.

The federal system of income transfers to persons may inadvertently reduce the supply of labor. For example, in the area of Social Security, some evidence suggests that an increase in the level of disability benefits relative to earnings increases the number of applications for disability. <sup>25/</sup> In addition, some economists believe that the level of benefits under the unemployment insurance system may significantly reduce the willingness of unemployed workers to accept job offers. In the area of welfare programs, some persons qualify for benefits under more than one income-conditioned program, with the result that their work effort may be discouraged. <sup>26/</sup>

Discovery and Innovation. Technological progress--the discovery and dissemination of new products and processes of production--is central to increasing productivity and economic growth, but very difficult to affect positively through government policies. For one thing, the process of discovery and innovation is not very well understood, and available government policies in this area tend to be quite indirect. Most studies of this issue tend to focus on such factors as the rewards from risk-taking, the overall economic environment, the outlook for business investment, obstacles posed by patent policies and government regulation, and the negative impact of inflation. Increased spending on research and development (R&D) may stimulate technological progress, but the relationship between R&D and productivity does not appear to be very direct.

Ways to stimulate R&D spending include federal subsidies that lower the private sector's cost of undertaking R&D. A tax credit for R&D would be one approach that might be considered. Another could involve government contracts and grants for the development

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<sup>25/</sup> M.E. Lando, M.B. Coate, and R. Kraus, "Disability Benefit Applications and the Economy," Social Security Bulletin, vol. 42, no. 10 (October 1979), pp. 3-10.

<sup>26/</sup> While some persons may qualify for benefits under more than one program, others who are equally poor may not qualify for any assistance. See U.S. Congress, Joint Economic Committee, Subcommittee on Fiscal Policy, Studies in Public Welfare, 1972-1974.

of specific technologies, or productivity centers involving "partnerships" between industry and government for the development of new techniques. 27/

Investments in Human Capital. The development of workers' skills and adaptability is believed to play a crucial role in economic growth. Although this was one of the factors behind the growth of the federal support for education and training during the last three decades, it is not clear that changes from current policies would contribute to further increases in productivity. In principle, additional investments in education and training should raise productivity; in practice, however, federal support has not always resulted in additional investments that affect the earnings capacities of individuals.

Improved productivity has often been the justification for expanded federal aid to higher education, but some evidence suggests that economic returns from higher education may have declined in the 1970s, and in some instances federal aid may not have resulted in significant increases in higher education. Other forms of education and training--for example, improved high school programs or intensive training programs such as the Job Corps--may result in greater productivity gains. In addition, it may be possible to stimulate investment in higher education more effectively by modifying current programs. Assisting workers in their transition from declining to growing industries may be another promising area of human capital investment.

In sum, although it may be feasible to increase productivity by reallocating investment dollars in human capital, this reallocation requires careful analysis and program design.

Reducing and Modifying Government Regulations. Government regulations, such as those pertaining to health, safety, and the environment, reduce the growth of GNP and cause somewhat

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27/ On October 31, 1979, the Administration issued a statement concerning its plans for industrial innovation initiatives. The statement was made after an extensive "Domestic Policy Review" of the government role in innovation, which was begun in April 1978. Among the initiatives proposed are an increase in the Small Business Innovation Program administered by the National Science Foundation and the establishment of several "generic technology centers."

higher inflation because they use resources that otherwise might be devoted to increasing production. 28/ Nevertheless, regulations have significant benefits that are not reflected in conventional measures of GNP or productivity. To a significant degree, policymakers must balance the benefits of regulations against their costs, which include slower economic growth, although particular regulations could be examined to see whether the benefits justify the costs. In addition, there may be some scope for streamlining regulations or reducing their negative effects on economic efficiency. 29/

Promoting Competition. Government policies to promote competition contribute to increases in productivity by encouraging the efficient use of resources. In addition, competition is believed to spur technological improvements. Some of the ways in which competition might be increased include less government regulation, removal of constraints on imports, and reduction of monopoly powers in domestic labor and product markets.

#### ENERGY POLICY

Efforts to reduce inflation and increase U.S. economic growth could be frustrated, at least partially, until the United States reduces its dependence on imported foreign oil. Rapidly rising OPEC oil prices have increased domestic inflation, reduced real growth in domestic incomes, weakened the dollar, limited the flexibility of the Federal Reserve to pursue full-employment policies, and increased the sensitivity of the U.S. economy to foreign political developments. For this reason, the primary goal of energy policy in the United States has been and will

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28/ For an analysis of the impact of such factors as environmental regulation on measures of productivity, see Edward F. Denison, "Effects of Selected Changes in the Institutional and Human Environment upon Output per Unit of Input," Survey of Current Business, January 1978.

29/ Government regulation of transportation appears to be one area in which there may be substantial potential economic gains from reform.

continue in the foreseeable future to be, the reduction of petroleum consumption, specifically of imported petroleum, and the increase of domestic energy supplies. The energy legislation now being considered is aimed at conservation, at reducing dependence on foreign energy sources, and at encouraging domestic production of oil and substitute fuels.

The President's energy proposals include a so-called windfall profits tax on oil company profits, a program to encourage synthetic fuel production, energy assistance for low-income households, and tax credits for business and households to encourage energy conservation. There has been some discussion of a 50-cent increase in the gasoline tax, which would be offset by a reduction in Social Security taxes or, alternatively, a tariff on imported oil. Gasoline rationing has also been mentioned.

#### The President's Energy Program

The key element of the President's energy program is decontrol of domestic energy prices, coupled with a windfall profits tax that would capture a portion of oil company profits resulting from decontrol and from rising world oil prices. The tax, properly an excise tax, would be imposed on domestically produced petroleum. The House and Senate have agreed on a total net windfall profits tax of \$227.3 billion between 1980 and 1990. <sup>30/</sup> This would represent a sizable tax increase over the next decade. In the absence of any offsetting fiscal stimulus, it would have a contractionary effect on the economy.

The President's package, as spelled out in July 1979, proposed that the revenues from the windfall profits tax go into trust funds set up to encourage synthetic fuel production, to provide assistance to low-income families, and to fund public mass transportation. These programs would help to offset some of

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<sup>30/</sup> CBO estimates the total to be about \$200 billion. The CBO estimate assumes lower domestic oil supplies than do the estimates provided to the House and Senate by the Joint Committee on Taxation and the Treasury. For further details on this and related issues, see Congressional Budget Office, The Windfall Profits Tax: A Comparative Analysis of Two Bills (November 1979).

the macroeconomic impact of the tax, especially in 1980 and 1981. The Administration has substantially scaled down its goal for synthetic fuel production, which originally called for 2.5 million barrels a day by 1990 at a cost of \$88 billion. The synthetic fuel program now being discussed in the Congress is roughly half as large: the House version sets a goal of 500,000 barrels a day by 1985 and 2 million barrels a day by 1990, whereas the Senate version's goal is 1.5 million barrels a day by 1995.

The President has also announced that he will limit oil imports to 8.5 million barrels a day. This could be accomplished either by import quotas or by a tariff imposed by executive order under the Trade Expansion Act of 1962. Both measures would raise the domestic price of oil and related products. The principal defect of a quota, from a macroeconomic point of view, is that it would encourage foreign oil producers to raise the price of oil until U.S. demand fell below the quota level. An import tariff would raise the price of imported oil to the same level, but the additional revenues would go to the U.S. government rather than to foreign oil producers. The negative effect on the economy in either case would be the same, but the tariff would provide revenues to the government that could be used to offset the negative effect. Either course would lessen U.S. vulnerability to oil shocks and improve the U.S. trade balance. The Administration has been considering a tariff of \$4 to \$5 a barrel, but the details have not been made public. The Congress is considering legislation that would force the President to consult the Congress before making such a move.

It is difficult to gauge what the overall impact of the final energy measures will be. Given their approximate size and timing, their impact is likely to be relatively small in 1980 and 1981. Revenues from the windfall profits tax and the oil import tariff would accumulate more rapidly than the spending for synthetic fuels, low-income assistance, and public transportation, especially after the first few years. If the program caused a large, abrupt increase in the federal surplus (or a decrease in the deficit), it could have a depressing effect on the economy. This negative impact would be partly offset if the program succeeded in reducing U.S. dependence on foreign oil and improving the trade balance, thereby reducing the pressures on the dollar and on domestic monetary policy.

## A Gasoline Tax Increase

Both the Administration and the Congress have reportedly been discussing a 50-cent increase in the gasoline tax to reduce gasoline consumption. Because the resulting increase in revenues would be quite large, most of the proposals are tied to offsetting reductions in income taxes, business taxes, or Social Security taxes.

Estimates of the effect of such a tax increase depend on the assumed price elasticity of demand, and on whether commercial vehicles would be exempt from the tax. If one assumes that the short-run price elasticity is 0.15, that the tax is not adjusted for inflation, and that no vehicles are exempt, the gas savings in the first year would be about 350,000 to 400,000 barrels a day (representing roughly 5 percent of domestic consumption) and the resulting tax revenues would be \$50 billion to \$55 billion.

Such a sudden large tax increase would have a restrictive impact on the economy, unless offset by some other tax cut. Since the gasoline tax would, in the short run, add to the rate of inflation, it has been suggested that the offsetting tax cut should be in Social Security taxes. In light of this, a recent study by Wharton Econometric Forecasting Associates considered the following tax changes: a 50-cent per gallon gasoline tax increase starting in mid-1980, a Social Security tax cut of 1 percent for employers and employees, and a Social Security tax cut of 2 percent for the self-employed, both of the latter beginning in early 1980, 31/ These tax changes would partly offset each other by the end of 1981, with the level of real GNP and the level of prices each roughly 1 percent higher. The combination of tax changes would not, however, have the same impact on different sectors of the economy and different income groups.

A gasoline tax increase would probably improve the U.S. trade balance and have a favorable impact on the value of the dollar. The Wharton study suggests that the current account trade balance would be improved by over \$18 billion in 1981. This would ease pressures on the dollar, probably making it easier for the Federal Reserve to lower interest rates.

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31/ Wharton Econometric Forecasting Associates, Inc., Post-Meeting Alternate Solutions, December 3, 1979.

Gasoline rationing has also been mentioned as a means of conservation. Since there is no clear consensus as to how such a program would be administered or how effective it would be, it is very difficult to quantify the effect on the economy.

#### SHORT-RUN EFFECTS OF ILLUSTRATIVE FISCAL PACKAGES

Five packages of fiscal policies that might be considered for the 1981 budget are analyzed in this section. The estimates of the short-run economic effects of these illustrative packages are highly uncertain. A principal reason is that the economic environment is now much more inflationary than it has been throughout most of the postwar period from which the content of the large macroeconomic models is drawn. Some believe that expansive fiscal policies may be more inflationary and their international repercussions, which are heavily influenced by psychological reactions, more important than is assumed in the economic models. Moreover, the packages analyzed are considerably more complex in their effects than, say, a simple cut in personal income taxes or a change in government purchases. The impacts of changes in business taxes are much less certain than, for example, those of a typical change in personal income taxes. Additional uncertainty arises from the timing of federal expenditure changes such as those of countercyclical public works.

The five illustrative fiscal packages presented here are:

- o A \$21 billion fiscal stimulus package consisting of a \$15 billion cut in personal income taxes and a \$6 billion increase in countercyclical spending programs (\$2 billion for countercyclical public service employment, \$2 billion for accelerated local public works, and \$2 billion for antirecession fiscal assistance for states and local governments).
- o A \$20 billion tax reduction package involving a \$15 billion cut in payroll taxes and a \$5 billion cut in corporate taxes--half in the form of a corporate tax rate reduction and half through an acceleration in depreciation allowances. 32/

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32/ The \$2.5 billion from accelerated depreciation is an average over a three-year period, since the pattern of revenue loss from this kind of tax change is small the first year but grows for several years.

- o A \$35 billion tax reduction package composed of a \$12 billion cut in personal taxes, a \$15 billion cut in payroll taxes, and an \$8 billion cut in corporate taxes (half in the form of a corporate tax rate reduction and half through an acceleration in depreciation allowances).
- o A \$20 billion restrictive package in the form of an across-the-board reduction in federal expenditures.
- o A \$15 billion personal income tax cut and a \$12 billion increase in defense spending.

The estimated short-run effects of these fiscal packages are summarized in Table 22. If interpreted with extreme caution, they may suggest order-of-magnitude effects, useful in a discussion of alternative budgetary strategies.

Package 1: \$21 Billion Fiscal Stimulus. This package, of which about three-fourths represents cuts in personal income taxes and the remainder represents expenditure increases, would provide a fairly fast-acting stimulus and would counteract some of the projected increase in unemployment. The spending, however, could not be implemented without delays that would postpone part of the economic impact of the package and would also slow the budget impact. Real GNP (in 1972 dollars) would be about \$10 billion higher after four quarters, and \$11 billion higher after eight quarters. The unemployment rate would be reduced by about 0.3 percentage point after one year and by slightly more than 0.3 percentage point after two years, with the PSE component making a disproportionately large contribution to this decline. The inflation impact would be felt more slowly than the effect on real output. The price level would be about 0.1 percent higher after two years and about 0.2 percent higher after the third year.

Package 2: \$20 Billion Tax Reduction. This package, composed of cuts in payroll and corporate taxes, would also stimulate the economy, but quite likely would have no adverse effect on prices. It would also be more heavily weighted toward cuts in business taxes than most past tax reduction packages. Roughly 60 percent of the package would represent business tax cuts, since half of the Social Security payroll tax is paid by employers and half by employees. In the past, business has tended to get about one-third of a tax reduction package.

The package would increase real GNP by roughly 0.5 percent after four quarters, or about the same as the first package. It would slightly reduce rather than increase inflation, principally because the reduction in the part of the payroll tax paid by business would directly reduce costs and thus inflationary pressures.

Package 3: \$35 Billion Tax Reduction. This would be the most expansive of the five illustrative packages. At the end of two years, real GNP would be roughly \$20 billion higher and employment about 0.7 million greater. It would not significantly increase inflation, however, because the reduction in costs from the payroll tax cut would offset some or all of the inflationary impact from the stimulus to aggregate demand.

Package 4: \$20 Billion Reduction in Spending. Spending cuts of this magnitude would be very difficult to achieve by the beginning of fiscal year 1981. The econometric simulation assumed a "step reduction" in federal spending--roughly across-the-board--but in actuality more time would be required to phase down program levels and make other necessary adjustments, probably including changes in current law.

This package would move the 1981 budget significantly toward balance. It would have a rather immediate adverse impact on real GNP and unemployment, while its beneficial effect on inflation would materialize much more slowly. For example, after four quarters the unemployment rate would be roughly 0.3 percentage point higher. On the other hand, the price level after eight quarters would be about 0.1 percent lower and 0.3 percent lower by the end of the third year.

Package 5: \$15 Billion Personal Income Tax Cut and \$12 Billion Increase in Defense Spending. This package would have roughly the same effect on the unemployment rate as the first and third packages, but it would be more inflationary. By the end of the third year, prices would be about 0.4 percent higher with this package, compared with 0.2 percent higher for Package 1 and no significant change for Package 3.

TABLE 22. ESTIMATED MACROECONOMIC EFFECTS OF ALTERNATIVE FISCAL POLICY PACKAGES

| Economic Variable  | Package                         |      |             |             |             |
|--|---------------------------------|------|-------------|-------------|-------------|
|  | 1                               | 2    | 3           | 4           | 5           |
|  | <u>Impact after 4 Quarters</u>  |      |             |             |             |
| Real GNP (billions of 1972 dollars)                        | 10                              | 8    | 15          | -12         | 18          |
| Employment (thousands)                                     | 400                             | 250  | 475         | -400        | 600         |
| Unemployment Rate (percentage points)                      | -0.3                            | -0.2 | -0.3        | 0.3         | -0.4        |
| GNP Implicit Price Deflator (percent)                      | 0 <u>a/</u>                     | -0.2 | -0.2        | 0 <u>b/</u> | 0 <u>a/</u> |
| Net Budget Cost, Fiscal Year Average (billions of dollars) | 12                              | 12   | 20          | -11         | 18          |
|  | <u>Impact after 8 Quarters</u>  |      |             |             |             |
| Real GNP (billions of 1972 dollars)                        | 11                              | 12   | 20          | -12         | 17          |
| Employment (thousands)                                     | 475                             | 375  | 700         | -475        | 650         |
| Unemployment Rate (percentage points)                      | -0.3                            | -0.3 | -0.5        | 0.3         | -0.4        |
| GNP Implicit Price Deflator (percent)                      | 0.1                             | -0.2 | -0.1        | -0.1        | 0.2         |
| Net Budget Cost, Fiscal Year Average (billions of dollars) | 12                              | 15   | 25          | -12         | 15          |
|  | <u>Impact after 12 Quarters</u> |      |             |             |             |
| GNP Implicit Price Deflator (percent)                      | 0.2                             | -0.2 | 0 <u>b/</u> | -0.3        | 0.4         |

a/ Positive, but less than 0.1 percent.

b/ Negative, but less than 0.1 percent.



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**APPENDIX**

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APPENDIX. THE CPI AS A MEASURE OF INFLATION

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Earlier in this report, it was stated that the Consumer Price Index (CPI) recently has been a misleading measure of changes in the cost of living. This has resulted principally from a treatment of homeownership costs that caused the CPI to accelerate far more rapidly than other, more broadly based, measures of price performance. For the same reason the CPI may, if the housing market softens and interest rates begin to decline, understate inflation in months to come. No price index can provide an accurate measure of the "true" inflation rate for all circumstances. A better indication of recent movements in the cost of living for most people may be gauged from alternative inflation measures based on GNP data.

Measurement of Homeownership Costs in the CPI

Homeownership costs contributed a total of 2.9 percentage points to the rise in the CPI in 1978 and 4.6 percentage points to its rate of increase in the first 11 months of 1979--more than a third of the total increase in the CPI over this period. 1/ Probably not much more than half of this represents an increase in the cost of living for most people. There are two interrelated problems with the CPI homeownership cost measure as it is now structured. The first is its conceptual basis, and the second is the weight given to homeownership outlays in overall consumer expenditures.

Conceptual Problems. The CPI treats houses in the same way it treats consumer goods generally--as though they were consumed in the year they were bought. In fact, however, the services rendered by a house are consumed over its entire lifetime. When

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1/ These figures refer to the amount by which the rise in the CPI would be reduced if there were no increase in the homeownership component. Alternatively, the rate of increase of the CPI, excluding homeownership, was 8.0 percent in 1978 and 11.0 percent in the first 11 months of 1979.

a house is recognized as a durable good, it becomes clear that the house's future value may be affected by changes in housing demand or supply or even by tax laws. In a very real sense, a house is an asset. The owner invests in it; he can resell it; and it yields a return like other investments. The price of a house may thus reflect not only the relative supply and demand for shelter, but also the prospective return on a speculative asset.

In the past several years, while house prices have risen substantially, a parallel increase in rental prices has not occurred. This suggests that the current cost of shelter in the CPI has been inflated by the capital appreciation that has taken place in housing. Including recorded house prices in the CPI thus overstates the rise in shelter costs during a period of capital appreciation in housing. No correction is made for the increase in capital value of a house, so this distortion is then carried over to the CPI measures of mortgage costs, property taxes, and insurance that, because their size is affected by the price of the house, increase as well.

Weight in Consumer Expenditures. The second problem in the current treatment of homeownership components is that the concepts used lead to an overweighting of these items in the CPI. <sup>2/</sup> The treatment of mortgage interest costs (and of property taxes) takes into account only changes in the amount of total outlays. Since these expenditures are deductible from income in computing personal income taxes, the net costs to the homeowner are not the same as the total outlays. For purposes of weighting, the gross outlays instead of the net amount are included in the CPI. Moreover, the degree of the exaggeration has grown over time as inflation has pushed many households into higher marginal tax brackets. Even if there is no change in the mortgage rate, the amount saved on taxes becomes greater because the interest is deducted from income taxed at a higher rate.

Another cause of overweighting is that instead of using the actual outlays for houses in a given year as a fraction of

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<sup>2/</sup> Weights in the CPI are based on a survey of consumer expenditure patterns in 1972-1973. For a description of this survey and the treatment of homeownership, see The Consumer Price Index: Concepts and Content Over the Years, U.S. Department of Labor, Bureau of Labor Statistics, Report 517, 1977.

total consumer expenditures, the current CPI weighting scheme includes the entire purchase price and all of the interest payments over the life of the mortgage. The CPI takes account of the fact that not everyone purchased a house in the survey year, but, even after allowing for the fraction of people who did, this is an enormous weight--amounting to one-fifth of the total CPI. It means that an increase of 10 percent in the CPI homeownership measure causes the overall CPI to rise 2 percent.

The Size of the CPI Distortion. The distortion in the index stems from the introduction of capital appreciation into the CPI as though it were an increase in the cost of living when its effect is more nearly the opposite. When houses appreciate in value, the owners experience an increase in their net worth. They can turn this into purchasing power by borrowing on the higher value of their property, or by making corresponding reductions in other forms of saving. The effect is as if prices had generally decreased, since with given incomes they can buy more by liquidating some of the increased equity in the houses they own.

The size of the distortion introduced by the current homeownership measure can be estimated by substituting an alternative measure of shelter costs. Two alternatives that have received serious consideration by the Bureau of Labor Statistics (BLS) are described below.

The first alternative is the rental equivalence measure. It traces the path of actual rental rates as a proxy for the value of the flow of shelter services from homeownership. It thus treats the homeowner as though he were an investor who rents out the use of the house to himself. The value of a house as a source of shelter services, as distinguished from the value of the house as a speculative asset, is approximated by the value of rent charged for nonowner-occupied housing. When the CPI rental measure is substituted in place of the current homeownership measure, with a rough adjustment of the weight, the rate of inflation as measured by the CPI is 1.1 percentage points less in 1978 and 2.2 percentage points lower (at an annual rate) in the first 11 months of 1979. However, the size of the CPI distortion may be overstated by these estimates as a result of rent controls in some cities, which tend to hold rent increases below market rates.

The other alternative is the user-cost measure. It attempts to gauge the actual net outlays for owner-occupied housing, taking into account both the capital appreciation and the foregone earnings on the equity already in place. In addition, it includes

the cost of debt service, maintenance, taxes, and insurance. This measure does not, however, take into account the effect of deducting financing costs and property taxes in determining taxable income--and, as a result, is likely to overstate the real cost. Using recalculated weights, this user-cost alternative reduces the measure of inflation by 1.2 percentage points in 1978. The difference in 1979, however, does not appear to be significant. This measure is somewhat volatile and may need observation over a longer period of time before its difference from the current measure can be evaluated.

Both alternatives have serious technical problems, and they are used here not as ideal substitutes but only in an attempt to estimate the possible magnitude of the present distortion. BLS is continuing to work on improvements that may permit a correction of this distortion sometime in the future.

The Effect of the Distortion. More than one-quarter of the U.S. population has at least a portion of its income formally indexed to the CPI, including 34 million Social Security recipients, 3 million federal and military retirees, and 9 million wage earners. The wages paid to many other workers are informally indexed to the CPI. The index is also used to determine many other income flows such as those covered by long-term contracts and alimony or child support settlements. Two years ago, BLS estimated that every 1 percent change in the CPI caused a redirection of more than \$1 billion in income flows. Recent estimates suggest that a 1 percent change now triggers at least \$1.5 billion in federal expenditures.

The latter estimate suggests that in the past two years the CPI distortion, relative to the rental equivalence measure, may have caused as much as \$5 billion of added federal expenditures. In addition, it has caused indexed wages to rise higher than they would have otherwise. The higher wages are an increased cost to producers, and are eventually passed forward to all consumers in the form of higher prices. In turn, the higher prices push the CPI up further, compounding the initial mismeasurement and lending momentum to the inflationary process.

One final aspect of the CPI measurement problem should be noted. Interest rates tend to follow a cyclical pattern. If the economy enters a recession, it is likely that interest rates, including mortgage interest rates, will start to decline. Correcting the homeownership measure while interest rates are at their peak would permanently build the upward distortion into the CPI

level. If left unchanged, however, a decline in mortgage interest rates over the next several quarters would exert a substantial downward pressure on the CPI, thus offsetting a portion of the distortion in the index.

### Alternatives to the CPI

The Department of Commerce constructs price measures for various components of the gross national product (GNP) in the process of calculating U.S. economic output in nominal and real terms. These measures, known as implicit price deflators, are built up from detailed price indexes in the CPI and other sources. They differ from the CPI in that they use current-period consumption patterns as weights instead of the 1972-1973 consumption patterns employed in the CPI, thus eliminating one source of possible bias in the inflation measure. In addition, homeownership cost is treated as a rental equivalence, which reduces the distortion discussed earlier.

Some of these deflators have the further advantage of excluding the prices of imported goods. While it is true that any rise in import prices represents a rise in the cost of living, there are disadvantages in an inflation measure that reflects import prices. Higher import prices may mean that the country must transfer more real resources abroad and reduce domestic consumption. Indexation of these kinds of price increases is an effort to insulate those whose incomes are tied to the index, but in the process it may shift a disproportionate share of the burden onto those whose incomes are not indexed.

A list of some of the alternative price measures includes:

Personal Consumption Expenditures (PCE) Deflator. This measure has approximately the same coverage as the CPI and is constructed primarily from CPI detailed indexes. It employs a rental equivalence measure for housing costs and treats used cars differently than the CPI, measuring them on a net rather than gross basis. It includes prices of imported consumer goods. This measure is now being published on a monthly basis.

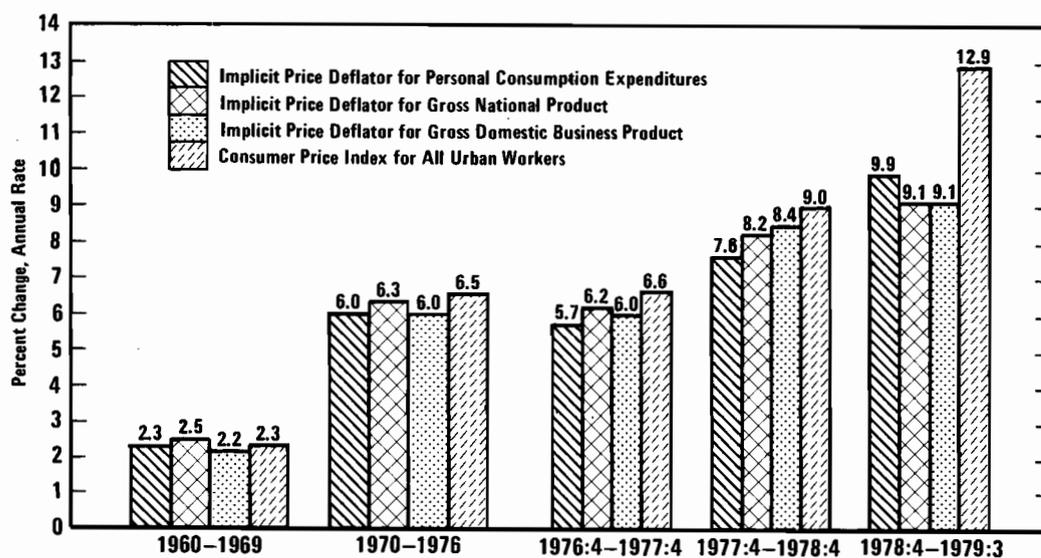
Gross National Product (GNP) Deflator. This broad measure includes the prices of consumption goods, investment goods such as business equipment, residential and nonresidential structures, and business inventories, as well as the prices

of goods and services purchased by the government. It also covers net foreign trade, adding export prices and subtracting import prices, thus removing the price rises which originate outside the U.S. economy.

Gross Domestic Business Product (GDBP) Deflator. This measure differs from the GNP measure primarily in excluding the government sector. It also makes minor adjustments to the consumption and net export sectors. It represents the movements of prices in the domestic private business sector of the economy. Like the GNP measure, it subtracts import prices.

A comparison of the performance of these measures over recent time periods is given in Figure 14. Until recent years, there have not been large differences between them. Over the last three years, however, the CPI has risen, on the average, about 1-1/2 percentage points faster each year than the other measures. The effect of removing import prices is most visible in 1979 when the GNP and GDBP deflators rise less than that for the PCE.

Figure 14.  
Comparison of Alternative Inflation Measures



SOURCES: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce, Bureau of Economic Analysis.

One of the features of a deflator is that it measures both price change and composition change at the same time. The deflator's advantage in having current-period consumption determine the weights attached to each component brings with it ambiguity as to how much of the change in the deflator was due to price change and how much to shifts in consumption patterns.

It is difficult to find a measure of inflation that is ideal for all uses. For some purposes the limitations of individual measures can be overcome by looking at two or more measures in conjunction.

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