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ECONOMIC BACKGROUND FOR A TAX REDUCTION BILL

PREPARED FOR THE USE OF THE

COMMITTEE ON WAYS AND MEANS

U.S. HOUSE OF REPRESENTATIVES

BY THE STAFF OF THE

JOINT COMMITTEE ON TAXATION

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INTRODUCTION

This pamphlet is a brief discussion of some of the economic background which is relevant to a tax reduction bill. It has been prepared in connection with the House Ways and Means Committee's markup of the tax cut bill.

Section I is a brief summary of some of the current problems with the American economy, including sluggish economic growth, high unemployment, high inflation, high interest rates, slow growth in real wages, and special problems in particular sectors of the economy. Section II summarizes several economic forecasts of the next several years. Section III discusses longer-term trends in several variables which play an important role in determining the capacity of the American economy to produce goods and services, including labor supply, saving, investment, research and development, and productivity. Section IV presents data on the Federal budget, including projections for the next three fiscal years.

The staff is planning to distribute additional pamphlets on individual income tax cuts, capital cost recovery, and possibly other specific areas.

I. PRESENT PROBLEMS IN THE ECONOMY

At the present time, the American economy is experiencing a combination of sluggish economic growth, high unemployment, high inflation, high interest rates, declining real wages and special problems in several specific sectors. This section is an overview of these problems.

Economic growth

After 4 years of relatively rapid recovery from the severe 1974–75 recession, the U.S. economy experienced little growth in 1979 and 1980. Gross national product adjusted for inflation (real GNP), the most comprehensive statistical measure of the goods and services produced by U.S. residents, grew by only 1.7 percent between the fourth quarter of 1978 and the fourth quarter of 1979 and declined by 0.3 percent between the fourth quarter of 1979 and the fourth quarter of 1980. In 1980, the economy followed a roller-coaster pattern, declining at an annual rate of 9.9 percent in the second quarter, mainly because of the temporary experiment with credit controls, and then recovering about 60 percent of the lost ground in the last half of the year.

The preliminary data for the first quarter of 1981 showed economic growth at an annual rate of 6.5 percent. While this is a rapid growth rate, especially in view of the social security tax increase which took effect at the beginning of the year, it still only lifted real GNP to a level 0.5 percent higher than the peak attained in the first quarter of 1980. Business investment, exports and federal government purchases accounted for a disproportionate share of the growth in the first quarter.

Unemployment

The unemployment rate in March 1981 was 7.3 percent, and it has been at approximately that level since May 1980. In contrast, the unemployment rate averaged 6.0 percent in 1978 and 5.8 percent in 1979. The 7.3-percent overall rate was an average of an unemployment rate of 5.9 percent for adult men, 6.6 percent for adult women and 19.1 percent for youths. The unemployment rate for whites was 6.5 percent; that for blacks and other races was 13.7 percent.

About 16 percent of the unemployed have been in that status for more than half a year. This is double the percentage of long-term unemployed in 1979 and early 1980.

Inflation

Inflation has been high for several years. As measured by the consumer price index (CPI), the inflation rate was 13.3 percent in 1979, 12.4 percent in 1980 and about 10 percent in the first quarter of 1981.

The CPI has been criticized as a measure of inflation on a number of grounds. The principal criticism in recent years has been that the CPI gives too large a weight to housing expenditures and measures the price of housing in a way which does not properly recognize that

homeowners view their house as an investment as well as a place to live. Its treatment of housing costs gives the CPI an upward bias in periods of increasing long-term interest rates, such as 1979 and 1980.

A price index which does not suffer from this problem is the GNP deflator, which is constructed from the data used to estimate gross national product. The GNP deflator is not biased upward in periods of rising interest rates and is, therefore, a better measure of inflation in years like 1979 and 1980. It is not, however, entirely free from problems of its own.

The GNP deflator grew by 8.1 percent between the fourth quarter of 1978 and the fourth quarter of 1979 and by 9.8 percent between the fourth quarter of 1979 and the fourth quarter of 1980. Thus, the GNP deflator exhibited a considerably lower inflation rate than the CPI in 1979 and 1980 but a more alarming acceleration between those two years. Another variant of the GNP deflator, the fixed-weight price index, which corrects some of the biases of the GNP deflator, grew by 9.1 percent in 1979 and by 9.5 percent in 1980, showing a less dramatic acceleration of inflation. A third variant, the deflator for personal consumption, grew by 9.5 percent in 1979 and by 10.1 percent in 1980.[1]

The preliminary data for the first quarter of 1981 show a deceleration of the GNP deflator to a growth rate of 7.8 percent. However, the fixed weight price index grew at a rate of 9.9 percent, indicating that most of the deceleration of the GNP deflator resulted from the "shifting weight" bias, not from a genuine deceleration of inflation.

Interest rates

Interest rates fluctuated dramatically in 1980 as a result of the high inflation rate and changes in the way the Federal Reserve System conducts monetary policy. Until 1979, the Fed attempted to maintain day-to-day control over fluctuations in short-term interest rates and supplied enough reserves to the banking system to achieve its interest rate target, even if that meant allowing wide fluctuations in the growth rate of the money supply. This control over short-term rates had a spillover effect in dampening movements in long-term interest rates as well. For several years, the Fed had been gradually loosening its grip on interest rates and increasing its concentration on the alternative goal of controlling monetary aggregates, especially the money supply; and in October 1979 the Fed took a major step towards focusing on controlling money growth and permitting wider fluctuations in interest rates. (Monetarist economists feel, however, that the Fed

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[1] In addition to its more realistic treatment of housing, the GNP deflator differs from the CPI by being an index of the prices of goods and services Americans produce, while the CPI is an index of the prices of goods and services Americans consume. Thus, oil prices have a larger weight in the CPI than in the GNP deflator because the United States produces less oil than it consumes. The deflator for personal consumption, like the CPI, is an index of consumer prices.

Any price index involves weighting the various goods and services whose prices are being used to construct the index. The CPI uses, as its weights, consumer expenditures in 1972–73. The GNP deflator uses weights which are based on production in the current period, which introduces biases whenever the composition of production shifts. Similarly, the deflator for personal consumption, whose weights are based on current period consumption, is biased when the composition of consumption changes. The fixed weight price index uses 1972 production as its weights and, therefore, avoids any biases resulting from shifting weights.

still has not gone far enough in emphasizing control over the money supply and deemphasizing stability in interest rates.)

The interaction of the Fed's new policy, uncertainty over inflation, and the brief experiment with credit controls in the Spring, created extraordinary fluctuations in interest rates in 1980. The 3-month Treasury bill rate began the year at 12.0 percent, peaked at 15.5 percent in March, fell to 7 percent in June, and rose to 15.7 percent in December. The prime rate charged by banks rose from 15.25 percent in January to 19.5 percent in March, fell to 11 percent in July and then rose to a record 21.5 percent in December. In recent months, short-term interest rates have declined from their peaks, and the 3-month bill rate at the April 20 auction was 13.6 percent.

Long-term interest rates typically fluctuate less than short-term rates. However, in relative terms, they also fluctuated wildly in 1980. The average rate on Aaa corporate bonds rose from 11.1 percent in January to 12.0 percent in March, fell to 10.6 percent in June and then rose to 13.2 percent in December. Unlike short-term interest rates, long-term rates are currently at or above their 1980 peaks, presumably because of pessimism and uncertainty about the outlook for inflation.

Real wages

Sluggish growth in productivity and increased prices for energy have led to historically slow growth in real wages (i.e., wages adjusted for inflation). This is shown in table 1. Between 1972 and 1980, average hourly wage rates rose between 6 and 9 percent per year. However, when higher consumer prices are taken into account, growth in real wage rates between 1972 and 1980 averaged only 0.2 percent per year. Real wages actually declined in both 1974 and 1979–80, periods of sharply increasing oil prices.

Table 1.—Real Wages 1972–80

Year	Index of hourly earnings [1] (1967=100)		Percent change	
	Current dollars	1967 dollars [2]	Current dollars	1967 dollars
1972	137.5	111.9	6.4	2.7
1973	146.0	112.4	6.2	.5
1974	157.5	110.2	7.9	−2.0
1975	170.6	110.9	8.3	.6
1976	183.0	113.2	7.3	2.1
1977	196.8	114.8	7.5	1.5
1978	212.9	116.2	8.2	1.2
1979	229.8	115.3	7.9	−.8
1980	250.7	114.1	9.1	−1.0

[1] Private nonagricultural employment adjusted for interindustry shifts and overtime in manufacturing.

[2] Current dollar index deflated by implicit price deflator for personal consumption.

Source: The index of hourly earnings and the personal consumption deflator are published in *Economic Indicators* and the *Economic Report of the President*. Those publications measure real hourly earnings by deflating with the CPI. This table uses the deflator for personal consumption instead of the CPI.

Problems in specific sectors

Certain sectors of the economy were hurt much more than others by the economic events of 1980. These sectors include autos, housing, certain financial institutions, electric utilities and steel.

Autos

Retail sales of new cars produced by domestic manufacturers declined from 8.2 million in 1979 to 6.6 million in 1980. Chrysler, Ford, and Volkswagon of America experienced disproportionately large drops in sales. To some extent, this decline resulted from increased imports, which grew from 2.3 million in 1979 to 2.4 million in 1980. However, the principal reasons for the decline in domestic car sales were the decline in disposable income, increased auto prices, the extraordinarily high interest rates, and the increase in gasoline prices. Truck sales were also weak in 1980, falling from 3.5 million in 1979 to 2.6 million in 1980.

In the first quarter of 1980, domestic car sales rose above the 7-million rate, mainly because of the rebates offered by the car manufacturers. However, imports also rose to a rate of about 2.7 million units per year.

The decline in car sales has led to layoffs of hundreds of thousands of workers in the auto industry and the industries, like steel and rubber, for whom the auto manufacturers are a major customer. The three big auto manufacturers experienced losses totaling about $4 billion in 1980.

Housing

The housing industry is usually a major victim of high interest rates. In the past, tight money affected housing because high short-term interest rates drained funds from savings and loan associations and mutual savings banks, whose interest rates were limited by law. These institutions responded to the outflow of deposits (called disintermediation) by reducing their mortgage lending. However, the restrictions on interest rates paid by financial institutions have been considerably liberalized, and disintermediation *per se* was a less serious problem in 1980 than in previous periods of tight money. Instead, the demand for housing was reduced more by high mortgage interest rates than by outright unavailability of funds.

Housing starts declined from 2.0 million units in 1978 to 1.7 million units in 1979 and 1.3 million units in 1980. During 1980, starts fell to a seasonally adjusted annual rate of 0.9 million units in May but recovered to 1.5 million units in December. (Part of the recovery was sparked by an expansion of government subsidy programs.) Starts were at a seasonally adjusted annual rate of 1.4 million units in the first quarter of 1981. However, some analysts think that the housing sector is weaker than is implied by this statistic because it reflects the unusual warmth of the last winter and because building permits have been relatively low in recent months.

Financial institutions

Savings and loan associations and mutual savings banks were particularly hurt by the increase in interest rates in 1980. These institutions tend to have short-term liabilities, mainly deposits, and long-

term assets, mainly mortgages. Thus, their profitability tends to decline during periods of rising interest rates because their cost of funds rises much more than does the return on their assets, most of which are mortgages whose interest rates were established during periods of lower interest rates. Also, life insurance companies experience problems during periods of high interest rates because policyholders take advantage of the option to receive low interest loans on their policies.

Electric utilities

Electric utilities were also adversely affected by recent economic developments. The regulatory agencies which set electricity prices do not typically increase those prices immediately in response to increased costs. Instead, the price increases generally occur only after a lag. Thus, profits of utilities tend to suffer during periods of rapidly rising costs.

Costs for electric utilities rose rapidly in 1980 for several reasons. First, declining demand for electricity had the effect of raising costs per kilowatt hour because fixed costs of production had to be spread over a smaller quantity of sales. Second, the high levels of long-term interest rates in 1980 increased the cost of funds raised to finance new projects. Third, utilities operating or building nuclear power plants faced delays resulting from the increased concern about safety which followed the debacle at Three Mile Island. Many electric utilities experienced lower profits in 1980 than in 1979.

Steel

The steel industry had a bad year in 1980, mainly because of reduced demand for steel by two major customers—the auto and construction industries. The index of industrial production for the iron and steel industry fell from 113.2 in 1979 to 91.7 in 1980, a drop of 19 percent. (The index was 100 in 1967.) The index fell from 107.2 in January 1980 all the way to 68.1 in June, but by the end of the year it had recovered to 103.6. In January 1981, it stood at 106.4. Profits of steel companies were generally much lower in 1980 than in 1979, but they were reasonably healthy in the last quarter of 1980.

II. ECONOMIC FORECASTS

Table 2 presents several forecasts of the performance of the economy in the next few years. These forecasts include those of the Administration, the congressional budget committees,[2] CBO, DRI, Chase Econometrics, Merrill Lynch and Wharton. All the forecasts assume enactment of the Administration's economic program.

For purposes of estimating revenues, the most important variable is the gross national product (GNP) in current prices. The various forecasts of growth in current dollar GNP are not very far apart. One reason for this convergence is that all the forecasters agree that the Federal Reserve's policy of controlling money growth will keep current dollar GNP growth within a relatively narrow range of 11–13 percent per year.

The forecasts of real GNP (GNP adjusted for inflation), however, differ more significantly. For 1981, DRI, Wharton and the House Budget Committee are predicting real growth of 2½ to 3 percent, while the Administration, CBO, Chase, and Merrill Lynch are predicting growth of 1½ to 2 percent. The difference appears to be in the interpretation of the first quarter of 1981, which showed unexpectedly rapid growth of 6.5 percent. The less optimistic forecasters expect this strong first quarter to be offset by little or no growth in the second and third quarters; the more optimistic forecasters do not.

Table 2.—Summary of Administration and Other Economic Forecasts for 1981–83

	Calendar years		
	1981	1982	1983
(Percentage changes; 4th quarter to 4th quarter)			
Gross national product (current prices)			
Administration	11.0	13.3	11.8
CBO	12.0	12.0	(1)
House Budget Committee	12.8	12.3	11.4
Chase Econometrics	12.4	12.8	11.8
Data Resources	12.5	12.1	11.0
Merrill Lynch	10.4	12.0	11.3
Wharton	13.4	11.5	12.2

See footnote at end of table.

[2] The Senate Budget Committee is using the Administration's assumptions except for interest rates.

Table 2.—Summary of Administration and Other Economic Forecasts for 1981–83—Continued

	Calendar years		
	1981	1982	1983
Percentage changes; 4th quarter to 4th quarter—Continued			
Gross national product (constant prices)			
Administration	1.4	5.2	4.9
CBO	1.8	2.8	(1)
House Budget Committee	2.6	2.7	3.5
Chase Econometrics	1.9	4.2	3.7
Data Resources	2.9	2.6	2.9
Merrill Lynch	1.5	5.3	5.8
Wharton	2.7	2.2	4.0
GNP deflator			
Administration	9.5	7.7	6.6
CBO	10.0	9.0	(1)
House Budget Committee	10.0	9.4	7.6
Chase Econometrics	10.3	8.3	7.8
Data Resources	9.4	9.2	7.9
Merrill Lynch	8.7	6.4	5.2
Wharton	10.4	9.0	7.9
Consumer Price Index (CPI)			
Administration	10.5	7.2	6.0
CBO	10.7	9.6	(1)
House Budget Committee	11.1	9.9	8.5
Chase Econometrics	11.1	8.5	8.6
Data Resources	11.3	9.6	7.9
Merrill Lynch	9.5	6.6	6.9
Wharton	12.3	10.2	8.7
(Percentage; 4th quarter)			
Unemployment rate			
Administration	7.7	7.0	6.5
CBO	7.8	7.6	(1)
House Budget Committee	7.5	7.4	6.7
Chase Econometrics	8.0	7.3	6.3
Data Resources	7.0	6.8	7.3
Merrill Lynch	7.8	7.2	6.5
Wharton	7.6	7.9	7.6
(Percentage; annual average)			
Treasury bill rate (3 months)			
Administration	11.1	8.9	7.8
CBO	12.6	13.7	11.5
House Budget Committee	13.8	12.0	10.4
Senate Budget Committee	13.5	12.0	11.0
Chase Econometrics	13.3	11.5	10.7
Data Resources	12.7	14.0	12.1
Merrill Lynch	11.3	7.2	6.6
Wharton	14.4	15.7	14.3

[1] Not available.

For 1982, the Administration forecasts growth of slightly more than 5 percent, as does Merrill Lynch. Except for Chase, which forecasts 4-percent growth, the other forecasts are clustered between 2 and 3 percent. Essentially, the difference between these forecasts for 1982 concerns interest rates. The optimistic forecasters predict a sharp decline in interest rates, which will stimulate economic growth. The relatively pessimistic forecasts anticipate continued high interest rates and conclude that these high interest rates will prevent rapid growth.

For 1983, Merrill Lynch expects 5.8-percent growth in 1983, and the Administration expects 4.9-percent growth. The others range from the 4.0-percent growth forecast by Wharton to the 2.9-percent forecast by DRI.

All the forecasts predict a decline in the inflation rate, but they differ over its degree. Merrill Lynch expects a decline in the inflation rate (as measured by the GNP deflator) to 5.2 percent by 1983. The Administration expects a decline to 6.6 percent. The other forecasters predict a decline to just below 8 percent. Essentially, the forecasters who expect a rapid decline in the inflation rate believe that, if the U.S. commits itself to anti-inflationary policies, inflationary expectations will subside, which will cause a fairly rapid unwinding of the wage-price spiral. The less optimistic forecasters believe that it will take more time for expectations to be affected by policy changes and that the unwinding of the wage-price spiral will take more time because inflation is built into so many long-term contracts. The differences in the interest rate forecasts parallel these differing views of inflationary expectations.

III. TRENDS IN SUPPLY-RELATED VARIABLES

Economic growth and productivity

The most widely used indicator of economic growth is the gross national product adjusted for inflation (real GNP). Table 3 shows the annual growth rate of real GNP for each year since 1948. While the year-to-year changes in real GNP tend to reflect fluctuations in demand, the changes over longer periods of time, shown at the bottom of the table, reflect changes in supply—the capacity of the economy to produce goods and services. Table 3 shows that the economy grew at a rate of 3.8 percent per year in both the periods 1948–65 and 1965–73, but that the annual growth rate fell to 2.8 percent in the period 1973–79.[3]

Not only has economic growth slowed markedly since 1973, but some of that growth has been needed to pay higher prices for oil imports. The increase in the cost of oil imports since 1973 has amounted to about 0.4 percent of GNP per year, or about one-seventh of U.S. economic growth.

It is useful to distinguish between economic growth that results from additional hours worked and growth that results from additional output for each hour worked. Output per worker-hour is often called "productivity."

Table 3 shows annual changes in productivity during the postwar period. As with real GNP, year-to-year changes in productivity largely reflect fluctuations in demand, but longer-run changes result from changes in supply conditions. Productivity growth is smaller than overall economic growth to the extent that there is an increase in the number of hours worked.

The data in table 3 show a significant decline in productivity growth after 1965. It fell by one-fourth—from 3.2 percent to 2.4 percent—between 1948–65 and 1965–73 and by two-thirds—all the way to 0.8 percent—between 1965–73 and 1973–79. Students of productivity have offered numerous explanations of this productivity slowdown. These include the reduction in the growth rate of the amount of capital per worker, the reallocation of output among the different sectors of the economy, the increase in the proportion of young and female workers, additional government regulation, the reduction in the percentage of GNP spent on research and development, and the increase in energy prices.[4]

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[3] These particular years were chosen for the comparisons because they are all peaks of business cycles. Measuring economic growth rates between business cycle peaks minimizes the impact of purely cyclical fluctuations in demand and, therefore, helps focus on changes in supply. However, because there was probably more excess capacity in 1979 than in either 1965 or 1973, part of the slowdown in the growth rate after 1973 probably reflects demand, not supply.

[4] Higher energy prices might be expected to reduce productivity, as it is measured in table 3, because they encourage businesses to look for ways to economize on energy costs rather than for ways to economize on labor costs.

Table 3.—Economic Growth and Productivity, 1948–79

Year	Increase in real GNP (percent change)	Increase in output per worker hour (percent change)
1948	4.1	5.3
1949	.5	1.5
1950	8.7	7.9
1951	8.3	2.8
1952	3.7	3.2
1953	3.8	3.2
1954	−1.2	1.6
1955	6.7	4.0
1956	2.1	1.0
1957	1.8	2.5
1958	−.4	3.1
1959	6.0	1.6
1960	2.2	3.1
1961	2.6	3.3
1962	5.8	3.8
1963	4.0	3.7
1964	5.3	4.3
1965	6.0	3.5
1966	6.0	3.1
1967	2.7	2.2
1968	4.6	3.3
1969	2.8	.2
1970	−.2	.9
1971	3.4	3.6
1972	5.7	3.5
1973	5.8	2.7
1974	−.6	−2.3
1975	−1.1	2.3
1976	5.4	3.3
1977	5.5	2.1
1978	4.8	−.2
1979	3.2	−.4
1980	−.1	−.4
1948–1965	3.8	3.2
1965–1973	3.8	2.4
1973–1979	2.8	.8

Sources: *Economic Indicators* and *Economic Report of the President.*

Labor supply

Table 4 shows several statistics relevant to changes in the labor supply in the past 25 years. The "labor force participation rate" is the percentage of the civilian population age 16 or older which either has a job or says it is looking for one. For all persons, this rate stayed

close to 60 percent in the 1950's and 1960's but grew from 60.4 percent to 63.8 percent between 1970 and 1980. However, this overall pattern masks very different trends for men and women. The labor force participation rate of adult men has declined steadily in the past 25 years, mainly because of earlier retirement. In contrast, there has been a rapid increase in the labor force participation rate of adult women. Table 4 also shows that, while the proportion of the working age population in the labor force has increased, the average length of the work week has declined. In addition, there has almost certainly been an increase in the number of days during the year which the average worker spends on vacation.

Table 4.—Indicators of Labor Supply

Year	Labor force participation rate (percent) [1]			Average work week (hours) [3]
	All persons	Adult men [2]	Adult women [2]	
1954	58.8	87.8	32.7	39.1
1955	59.3	87.5	34.0	39.6
1956	60.0	87.6	35.1	39.3
1957	59.6	86.9	35.2	38.8
1958	59.5	86.6	35.5	38.5
1959	59.3	86.3	35.6	39.0
1960	59.4	86.0	36.2	38.6
1961	59.3	85.7	36.6	38.6
1962	58.8	84.9	36.5	38.7
1963	58.7	84.4	37.0	38.8
1964	58.7	84.2	37.5	38.7
1965	58.9	83.9	38.0	38.8
1966	59.2	83.6	38.8	38.6
1967	59.6	83.5	39.8	38.0
1968	59.6	83.2	40.4	37.8
1969	60.1	83.0	41.5	37.7
1970	60.4	82.8	42.2	37.1
1971	60.2	82.3	42.3	36.9
1972	60.4	82.0	42.7	37.0
1973	60.8	81.6	43.5	36.9
1974	61.2	81.4	44.4	36.5
1975	61.2	80.7	45.3	36.1
1976	61.6	80.3	46.2	36.1
1977	62.3	80.3	47.4	36.0
1978	63.2	80.2	48.7	35.8
1979	63.7	80.2	49.9	35.6
1980	63.8	79.9	50.8	35.3

[1] The labor force participation rate is the number of persons who either have jobs or say that they are looking for jobs divided by the civilian population age 16 or over.

[2] Age 20 years and over.

[3] Hours worked per week by production or nonsupervisory workers in private, nonfarm employment.

Sources: *Economic Indicators* and *Economic Report of the President.*

Thus, the typical adult male appears to be spending a smaller percentage of his lifetime at work. To some extent, this choice is a result of the facts that, as incomes rise, people increasingly prefer leisure to work and that people are spending more time in school. However, another factor could be the increase in tax rates on earned income which has occurred over this period.[5] This increase in tax rates will be discussed in detail in the forthcoming pamphlet on individual income tax cuts.

Capital formation

It is widely recognized that an important determinant of a worker's productivity is the amount of plant, equipment and other types of capital employed in connection with his job. Table 5 shows the growth rate of the capital/labor ratio for the private business sector of the U.S. economy. This ratio is basically the amount of plant and equipment per worker, adjusted for inflation. Much of the year-to-year variation in the growth rate of the capital/labor ratio reflects the business cycle (the ratio rises when unemployment rises during recessions), but the longer-term changes shown at the bottom of the table reflect changes in supply factors. The data show that there has been a sharp decline in the growth rate of the capital/labor ratio in the 1970's, a drop which was probably responsible for a sizable part of the decline in productivity during that period. However, the data also suggest that the decline in productivity growth between 1948–65 and 1965–73 was not caused by a decline in the growth rate of the capital/labor ratio.

The decline in the growth rate of the amount of plant and equipment per worker after 1973 is not the result of a decline in the percentage of GNP devoted to investment in plant and equipment. This is shown in table 6, which indicates that the percentage of GNP devoted to investment was at historically high levels in the years 1978–80, three years of falling productivity. There are instead two reasons for the decline in the growth rate of the amount of capital per worker. First, as the capital stock has grown more and more investment has been needed simply to replace obsolete capital. Second, the rapid growth of the labor force in the 1970's, resulting both from the entry into the labor force of the baby boom generation and the increase in labor force participation of married women, meant that more investment was needed simply to maintain the existing capital/labor ratio.

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[5] Another factor could be the impact of higher social security and disability benefits on retirement decisions.

Table 5.—Capital/Labor Ratio: Private Business Sector

Year	Index of the capital/labor ratio [1]	Percent change
1948	0.52	-----
1949	.55	+5.2
1950	.57	+3.4
1951	.58	+1.5
1952	.59	+2.7
1953	.60	+1.6
1954	.64	+5.8
1955	.63	−.4
1956	.64	+1.8
1957	.67	+4.4
1958	.72	+6.7
1959	.71	−1.6
1960	.72	+2.5
1961	.75	+3.6
1962	.76	+1.1
1963	.78	+2.3
1964	.79	+2.4
1965	.81	+1.7
1966	.83	+2.7
1967	.86	+4.2
1968	.89	+2.5
1969	.90	+2.1
1970	.96	+5.6
1971	1.00	+4.3
1972	1.00	+.3
1973	1.01	+.7
1974	1.04	+3.3
1975	1.11	+6.9
1976	1.10	−1.1
1977	1.09	−1.3
1978	1.07	−1.7
1979	1.07	0
1980	1.10	+3.3
1948–65		+2.6
1965–73		+2.8
1973–79		+1.0

[1] 1972=1.00.

Source: Bureau of Labor Statistics, Office of Productivity and Technology, April 1981.

Table 6.—Fixed Business Investment as a Percentage of GNP

Year	Investment in plant and equipment as a percentage of GNP
1948	10.1
1949	9.4
1950	9.5
1951	9.5
1952	9.0
1953	9.4
1954	9.3
1955	9.6
1956	10.4
1957	10.6
1958	9.3
1959	9.4
1960	9.6
1961	9.1
1962	9.2
1963	9.2
1964	9.6
1965	10.5
1966	11.0
1967	10.5
1968	10.4
1969	10.7
1970	10.5
1971	10.0
1972	10.2
1973	10.8
1974	10.9
1975	10.2
1976	10.1
1977	10.7
1978	11.2
1979	11.6
1980	11.2

Sources: Investment and GNP data from *Economic Indicators* and *Economic Report of the President.*

Research and development

Another explanation which is sometimes offered for the decline in productivity growth is reduced investment in research and development. Table 7 shows spending on R&D as a percent of GNP. Total R&D spending grew rapidly in the late 1950's and early 1960's but declined in the late 1960's and early 1970's. Because there is some lag between spending on R&D and improved productivity, the timing of the decline in R&D spending is consistent with the proposition that the decline was one of the sources of the decline in productivity growth after 1973. One recent study attributed a decline in productivity growth of 0.25 percent per year to the reduced contribution of R&D. It should be noted, however, that this decline in the percentage of GNP devoted to R&D is entirely a result of reduced spending for space and defense. These expenditures may not raise private sector productivity as much as R&D conducted by industry, which has been growing.

Personal saving

One determinant of investment in both plant and equipment and R&D is the percentage of their after-tax income which individuals devote to saving. Low saving rates, and correspondingly high consumer spending, often lead to tighter fiscal and monetary policies, which discourage investment. Table 8 shows total saving by individuals as a percentage of after-tax income. The data show that savings rates were lower in the late 1970's than in the early part of the decade. Table 8 also shows, as a percentage of after-tax income, the increase in consumer credit. These data show that changes in consumer credit (which represents negative saving) are responsible for much of the fluctuation in the overall savings rate.

Table 7.—United States Research and Development Expenditures by Source of Funds as a Percent of GNP, 1953–80

[Percent of GNP]

Year	Total	Federal			Industry	Universities and other nonprofits
		Total	Defense [1]	Non-defense		
1953	1.40	0.75	0.68	0.07	0.61	0.04
1954	1.54	.86	.77	.09	.64	.04
1955	1.55	.88	.76	.12	.63	.03
1956	1.99	1.15	.99	.16	.79	.05
1957	2.20	1.38	1.20	.18	.78	.04
1958	2.39	1.51	1.29	.22	.83	.05
1959	2.54	1.65	1.45	.20	.84	.05
1960	2.67	1.73	1.46	.27	.89	.05
1961	2.74	1.77	1.52	.25	.91	.06
1962	2.73	1.76	1.51	.25	.91	.06
1963	2.87	1.88	1.57	.31	.92	.07
1964	2.97	1.97	1.67	.30	.93	.07
1965	2.91	1.89	1.57	.32	.95	.07
1966	2.90	1.86	1.48	.38	.97	.07
1967	2.91	1.81	1.43	.38	1.02	.07
1968	2.83	1.72	1.33	.39	1.04	.07
1969	2.74	1.59	1.23	.36	1.07	.08
1970	2.64	1.49	1.12	.37	1.06	.09
1971	2.50	1.40	1.02	.38	1.02	.08
1972	2.43	1.35	.99	.36	1.00	.08
1973	2.34	1.25	.90	.35	1.02	.07
1974	2.32	1.19	.82	.37	1.05	.08
1975	2.30	1.19	.80	.39	1.03	.08
1976	2.28	1.15	.77	.38	1.05	.08
1977	2.26	1.15	.76	.39	1.04	.07
1978	2.27	1.13	.75	.38	1.05	.09
1979	2.29	1.13	.75	.38	1.08	.08
1980	2.34	1.14	(2)	(2)	1.11	.09

[1] Includes spending for defense and space purposes.
[2] Not available.

Source: National Science Foundation, *National Patterns of R. & D. Resources, 1953–1977 and 1953–1978–79, Science Indicators 1978,* and "Science Highlights," May 23, 1980.

Table 8.—Saving by Individuals as a Percentage of After-Tax Income

[In percent]

Year	Total saving by individuals	Increase in consumer credit
1960	5.6	1.3
1961	6.3	.7
1962	6.0	1.6
1963	5.4	2.2
1964	6.7	2.2
1965	7.1	2.2
1966	7.0	1.3
1967	8.1	1.0
1968	7.1	1.9
1969	6.4	1.7
1970	8.0	.8
1971	8.1	2.0
1972	6.5	2.4
1973	8.6	2.8
1974	8.5	1.0
1975	8.6	.9
1976	6.9	2.1
1977	5.6	3.1
1978	5.2	3.5
1979	5.2	2.7
1980	5.6	.2

Sources: National income accounts for total saving, Flow-of-Funds accounts for consumer credit.

IV. BUDGET PROJECTIONS

Administration budget

Table 9 shows the proposed budget of the Reagan Administration for fiscal years 1981–84, compared to the CBO estimate of the Reagan proposals and the budget reported by the House Budget Committee.

For fiscal year 1982, the Administration expects outlays of $695 billion, receipts of $650 billion and a deficit of $45 billion. It proposes net outlay cuts of $34 billion, relative to current law, and net tax cuts of $51 billion. CBO's estimates of those same proposals show outlays of $721 billion, receipts of $654 billion, and a deficit of $67 billion.

For fiscal year 1983, the Administration proposes outlays of $732 billion, receipts of $709 billion and a deficit of $23 billion. This budget includes a net tax cut of $97 billion and net outlay reductions of $60 billion. Of the outlay cuts, $30 billion have been proposed this year, and $30 billion will be proposed next year. CBO estimates the Administration budget to involve outlays of $766 billion (including the outlay cuts

Table 9.—Administration and Congressional Estimates of Budget Totals, Fiscal Years 1981–84

[In billions of dollars]

	Administration	CBO [1]	House Budget Committee [2]
1981			
Outlays	655	662	662
Receipts	600	599	611
Surplus or deficit (—)	—55	—63	—52
1982			
Outlays	695	721	715
Receipts	650	654	689
Surplus or deficit(—)	—45	—67	—26
1983			
Outlays	732	766	780
Receipts	709	707	778
Surplus or deficit(—)	—23	—59	—1
1984			
Outlays	770	818	839
Receipts	771	769	865
Surplus or deficit(—)	1	—49	26

[1] CBO reestimate of administration budget.
[2] Committee recommendations for first budget resolution.

to be proposed next year), receipts of $707 billion and a deficit of $59 billion.

For fiscal year 1984, the Administration expects outlays of $770 billion, receipts of $771 billion and a surplus of $1 billion. This includes a net tax cut of $145 billion and net outlay cuts of $79 billion, of which $44 billion are to be proposed next year. CBO estimates the Administration's 1984 budget to involve outlays of $818 billion, receipts of $769 billion and a deficit of $49 billion.

Private forecasts of the Administration budget

The private econometric forecasting companies have included the Reagan Administration's budget proposals as one of their alternative forecasts. Table 10 contains the budget totals for fiscal years 1981–1983 of the projections by Wharton, DRI and Chase Econometrics, along with those of the Administration. This comparison shows the variability inherent in precise projections of the budget deficit.

Wharton estimates lower outlays and higher receipts in fiscal year 1981 than do the Administration and the two other forecasters. As a result, Wharton predicts a considerably smaller deficit. The two other forecasts are close to the Administration's for the current fiscal year.

For the 1982 and 1983 fiscal years, both Wharton and Chase project greater deficits than the Administration. Chase estimates substantially higher outlays in each of the two later years, but the same level of receipts, and as a result shows larger deficits.

DRI estimates smaller budget deficits than the Administration in 1982 and 1983, reflecting higher receipts in both years and smaller outlays in 1983.

Table 10.—Estimates of Administration Proposals on Budget Totals by Econometric Forecasters, Fiscal Years 1981–83*

[In billions of dollars]

	Administration[1]	Wharton[2]	Data Resources[3]	Chase[4]
Fiscal year 1981:				
Outlays	655	645	656	656
Receipts	600	604	598	600
Deficit (—)	—55	—41	—58	—56
Fiscal year 1982:				
Outlays	695	695	695	715
Receipts	650	647	663	650
Deficit (—)	—45	—48	—32	—65
Fiscal year 1983:				
Outlays	732	758	729	761
Receipts	709	693	713	710
Deficit (—)	—23	—65	—16	—51

*Estimates do not include effects on economic forecasts of gross national product estimates for 1981, first quarter, published on April 20, 1981.

[1] Estimates published March 10, 1981.

[2] Estimates included in quarterly forecast dated March 4, 1981.

[3] Estimates prepared April 6, 1981.

[4] Estimates included in quarterly forecast dated March 23, 1981.

House Budget Committee budget

The House Budget Committee has recommended higher levels of budget outlays and receipts than the Administration and earlier achievement of budget surpluses. These recommendations are in H. Con. Res. 115 (H. Rept. 97–23, April 16, 1981). Committee recommendations for fiscal year 1982 call for $20 billion higher outlays than the Administration and $39 billion higher receipts. Budget receipts estimates include net tax reductions of $30 billion. The deficit, at $26 billion, is $19 billion smaller than the Administration has proposed.

No general tax reductions are recommended for 1983 and 1984, and outlays would be $48 and $69 billion higher in those two years, respectively. As a result of these targets in the resolution, the budget in 1983 would be in surplus by $1 billion, and the surplus would reach $26 billion in fiscal year 1984.

Accuracy of recent budget estimates

The uncertainties associated with making budget predictions can be seen by comparing estimates of the budgets of the past several fiscal years with the actual results.

Table 11 indicates that Congress and the previous Administration were successful in predicting and controlling budget totals in only one of the past four fiscal years. The relatively good year was 1978, when the difference between the year-end deficit and the earlier projections was relatively small compared with the next 3 fiscal years.

In 1979, the year-end deficit was significantly smaller than anticipated before the fiscal year started, chiefly as a result of a substantial increase in revenues. In fiscal year 1980, however, the actual deficit was twice as large as estimated in the second budget resolution. This change in the deficit was the result of a $50 billion underestimate of outlays which was only partly offset by higher revenues.

The last year in the table, fiscal year 1981, is the current fiscal year. Instead of the actual budget totals, the table shows the CBO estimates of the 1981 budget.

Table 11.—Proposed and Actual Budget Totals, Fiscal Years 1978–81

[In billions of dollars]

	Administration proposal	1st resolution	2d resolution	Actual [1]
1978:				
Outlays	440	461	458	451
Receipts	393	396	397	402
Deficit	−47	−65	−61	−49
1979:				
Outlays	500	499	488	494
Receipts	440	448	449	466
Deficit	−61	−51	−39	−28
1980:				
Outlays	532	532	548	580
Receipts	503	509	518	520
Deficit	−29	−23	−30	−60
1981:				
Outlays	616	614	632	662
Receipts	600	614	605	599
Deficit	−16	+1	−27	−63

Note: Totals rounded to nearest whole number.

[1] 1981 is CBO estimate.

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