

CHAPTER 2

Reducing Inflation

ECONOMIC POLICY IN THE UNITED STATES faces a formidable challenge in the years immediately ahead. Inflation must be brought under control if the strength of the economy is to be maintained and if the significant gains in employment and output over the past 4 years are not to be jeopardized. Unwinding an inflation that has been building for more than a decade will require monetary and fiscal restraint to moderate the pace of economic growth. We will have to learn to achieve social objectives within the constraints of tight government budgetary policies. Widespread compliance with the President's standards for wage and price behavior will be essential.

This chapter presents a diagnosis of our inflationary problem and explains what the Administration is doing about it. Special factors were partly responsible for the acceleration of inflation during 1978, as Chapter 1 indicated, but there was also a substantial increase in the underlying rate of inflation. Unit labor costs rose sharply, reflecting some acceleration of wage inflation and a deterioration in the growth of productivity. These developments, along with their important implications for economic policy, will be analyzed in the following discussion.

THE 1978 ACCELERATION OF INFLATION

The current inflation has been gathering momentum for over 10 years. The acceleration began in the late 1960s, when the economic stimulus of the Vietnam war added pressures to an economy already approaching high employment. With the economy operating at very high rates of resource utilization, the rate of inflation rose from less than 2 percent in 1965 to about 6 percent in 1969.

In 1969, policies of monetary and fiscal restraint were applied to cool the overheated economy, but the results were disappointing. The economy headed into recession, and unemployment rose from 3½ percent of the labor force in 1969 to over 6 percent by the end of 1970. Nevertheless, inflation continued at a rapid pace. The rise of consumer prices, excluding food, continued unabated in 1970, and the rate of increase of average hourly earnings remained unchanged. When inflation failed to respond significantly to macroeconomic policy, a 90-day wage and price freeze was announced on

August 15, 1971; it was followed by a period of mandatory wage and price controls.

Relaxation of the controls began in 1973 in response to distortions and inequities that had begun to develop in the economy. The relaxation coincided with a second acceleration of prices, which was in part a consequence of rapid economic growth. Between the fourth quarter of 1971 and the first quarter of 1973, real gross national product (GNP) increased at an annual rate of $7\frac{3}{4}$ percent, unemployment dropped sharply, and capacity utilization rose. The major inflationary pressures, however, came from a series of large external shocks to the American economy. A simultaneous expansion in virtually all the industrial countries and the 20 percent depreciation of the dollar between mid-1971 and mid-1973 raised the cost of foreign goods. A worldwide crop shortage caused food prices to soar. Finally, the oil embargo by the Organization of Petroleum Exporting Countries (OPEC) and the subsequent rise in oil prices contributed to a nearly 60 percent increase in the energy component of the consumer price index (CPI) from the end of 1972 to the end of 1975.

In early 1975 the rate of inflation fell substantially from the double-digit rate of 1974. The severity of the 1974–75 recession was partly responsible. But smaller increases in food and energy prices and the end of the price bulge associated with the lifting of controls were important contributing factors. By the middle of 1975 the underlying rate of inflation was down to the 6 to $6\frac{1}{2}$ percent range. There was no further improvement during the early stages of the recovery, despite continued high unemployment and much excess capacity.

Each of the two major episodes of accelerating inflation in the last decade was fed in part by relatively stimulative fiscal and monetary policies, and each was followed by a recession stemming in part from more restrictive policy actions. But in neither case did the increases in unemployment and excess capacity bring inflation down to the levels that preceded the acceleration.

Once under way, a high rate of inflation generates responses and adaptations by individuals and institutions that perpetuate the wage-price spiral, even in periods of economic slack. Expectations develop that wages and prices will continue to rise at a rapid rate. In response, an increasing proportion of income is adjusted to inflation by indexation arrangements. Employee groups attempt to match the wage gains of other workers in order to avoid declines in their own relative earnings. And multiyear collective bargaining agreements, which now cover over 97 percent of the workers in large collective bargaining units, provide pay increases that are more likely to reflect past conditions than the actual economic environment prevailing during the term of the agreement.

The formal and informal adaptations to a long-standing inflation exert a powerful force tending to sustain inflation even after the originating causes have disappeared. Braking the momentum of past inflation would therefore

have been a serious problem for economic policy makers even without the acceleration of prices and wages during 1978. The price and wage developments of this past year have made the task even more difficult.

INFLATION IN 1978

The rate of price increase rose markedly in 1978. Some of the acceleration was the result of special factors discussed in the previous chapter: the sharp rise in food prices early in the year and the fall in the value of the dollar that exceeded the depreciation warranted by underlying economic conditions. A minor offset to this was the stability of world oil prices after OPEC elected not to raise oil prices in the face of the sluggish world economic recovery and the consequently weak demand for oil.

The larger part of the 1978 acceleration, however, came from an unexpected increase in the underlying rate of inflation. The rise in consumer prices, excluding food and energy, quickened from 6.4 percent in 1977 to 8.6 percent in 1978, as shown in Table 12. This is the development that has posed the most serious challenge to economic policy.

The behavior of the underlying rate of inflation is related to movements in costs. In 1978 the increase in unit labor costs in the private nonfarm sector stepped up considerably, from 6.3 percent in 1977 to 8.9 percent

TABLE 12.—Annual rate of change in selected consumer and producer prices and employment costs, 1960–78

[Percent ¹]

Item	Relative importance, December 1977 (percent)	1960 to 1965	1965 to 1970	1970 to 1975	1976	1977	1978 ²
<u>Consumer prices</u>							
All items.....	100.0	1.3	4.5	6.9	4.8	6.8	9.0
Food.....	17.7	1.5	3.7	9.4	.6	8.0	11.3
Energy.....	8.6	.4	2.5	10.9	6.9	7.2	7.0
All items less food and energy.....	73.7	1.4	5.0	5.7	6.1	6.4	8.6
<u>Producer prices for finished goods</u>							
All finished goods.....	100.0	.6	2.8	8.6	3.3	6.6	8.7
Finished goods less foods.....	75.1	(³)	(³)	7.6	5.5	6.6	7.8
<u>Private nonfarm business, all persons</u>							
Compensation per hour.....		4.0	6.4	8.2	8.5	7.6	9.8
Contribution of:							
Wages and salaries and private fringes.....		3.8	5.9	7.3	7.7	6.9	8.7
Employer contributions to social insurance.....		.2	.5	.9	.8	.7	1.1
Output per hour.....		3.9	1.1	1.6	2.6	1.3	.8
Unit labor costs.....		.0	5.2	6.5	5.8	6.3	8.9
Implicit price deflator.....		1.1	4.2	6.6	5.2	5.9	7.9

¹ Preliminary.

² Through 1977, changes are measured from December to December for prices and from fourth quarter to fourth quarter for private nonfarm business data. For 1978, changes are from November to November for prices and from fourth quarter to fourth quarter for private nonfarm business data.

³ Not available.

Sources: Department of Labor (Bureau of Labor Statistics) and Council of Economic Advisers.

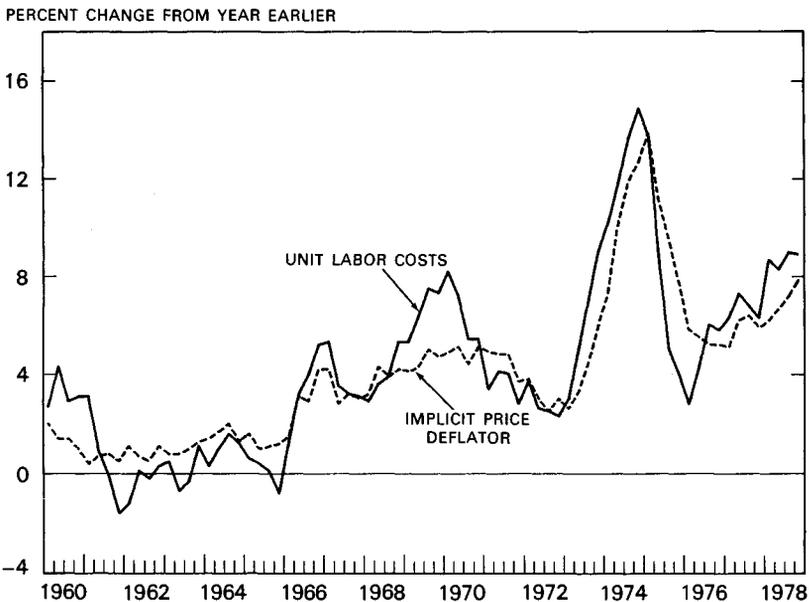
in 1978. Both of the determination factors of unit labor costs contributed to the acceleration. Compensation per hour went up from a 7.6 percent rate of increase in 1977 to a 9.8 percent rate during 1978. Productivity, which had risen only 1.3 percent for nonfarm business in 1977, advanced even more slowly—at a 0.8 percent rate in 1978.

The acceleration of cost pressures during 1978 was unevenly distributed. In manufacturing, unit labor costs, which had risen 5.8 percent in 1977, increased at an annual rate of 6.0 percent in 1978. Productivity in manufacturing rose more rapidly in 1978 than in 1977 (3.5 compared to 3.0 percent in 1977). However, the most substantial rise in the rate of increase of unit labor costs was in nonmanufacturing, where productivity actually declined.

Most econometric analyses of the relation between prices and wages conclude that fluctuations in productivity growth that are expected to be temporary are not usually translated into similar fluctuations in prices. For that reason price movements in the nonfarm sector are less volatile than year-to-year changes in unit labor costs. And in 1978 the sharp acceleration in unit labor costs, stemming in part from the very poor productivity record, was not fully matched by an acceleration in prices charged by nonfarm producers. Even so, the rise in unit labor costs was still a major factor in the acceleration of inflation (Chart 2).

Chart 2

Unit Labor Costs and Deflator, Nonfarm Business



NOTE: DATA RELATE TO ALL PERSONS.
SOURCE: DEPARTMENT OF LABOR.

EXPLAINING THE 1978 INFLATION

The worsening in the underlying rate of inflation during 1978 raises a fundamental question for macroeconomic policy: Has the U.S. economy reached full employment of its labor and capital resources? The question involves three issues concerning demand and unit cost pressures that are analyzed in the remainder of this section. The first is whether capacity utilization became so tight that there was excess demand in product markets, driving up prices relative to costs. The second has two aspects: How much did the wage acceleration that occurred in 1978 reflect excess demand in labor markets, and do those markets now approximate conditions in which further reductions in aggregate unemployment would raise the inflation rate? The third issue relates to productivity: To what extent is the recent disappointing behavior an aberration and to what extent does it reflect a more fundamental slowdown in the potential growth of the economy during the years immediately ahead?

How Tight Were Product Markets in 1978?

During the course of the recovery, rates of capacity utilization have increased significantly, and they rose still further in 1978. At the end of 1978 the 86 percent rate of capacity utilization in manufacturing indicated by the Federal Reserve index was still well below the highs of the early 1950s and mid-1960s, and somewhat below the highs of the 1972-74 period (Chart 3). In the materials-producing industries, where high rates of capacity utilization in 1973 were an important source of inflation, current rates of utilization have remained substantially below the 1973 peaks (Chart 3).

Statistical measures of capacity utilization offer only an imperfect guide to the presence or absence of excess demand in product markets. There is other evidence, however, that industrial capacity was not under severe pressure. Typically, periods of capacity strain lead to sharp increases in unfilled orders, especially in the durable goods industries. But ratios of unfilled orders to shipments have remained far below earlier highs, both for durable goods industries as a whole and for the nondefense capital goods industries (Chart 4).

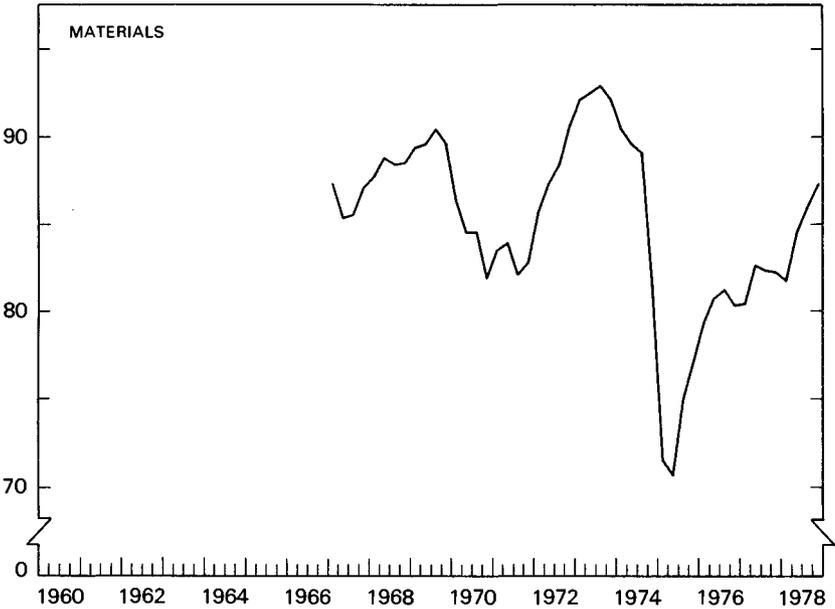
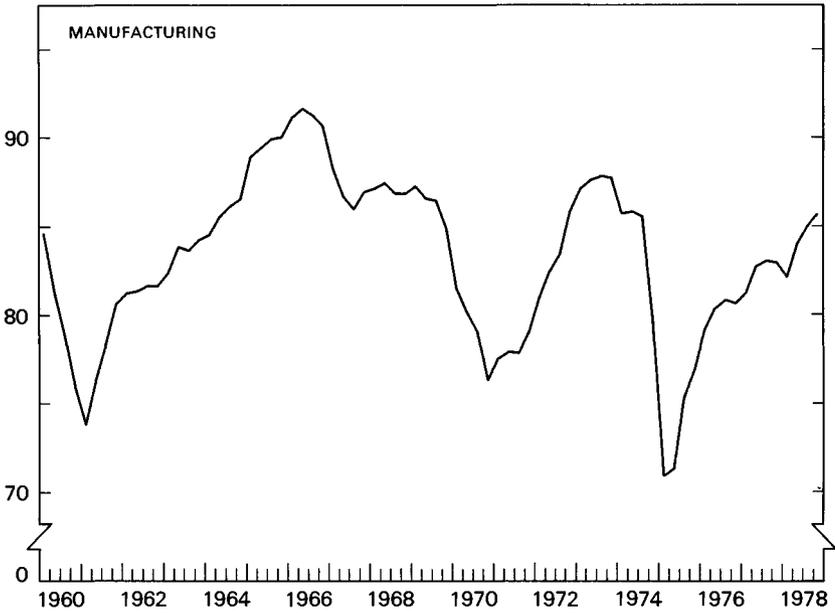
At the same time, excess demand developed in a few industries. For example, the building materials industry appeared to be under demand pressure because of capacity limitations. The very high and sustained level of single-family home building, combined with a rapid growth in home installation of energy-saving measures, led to a sharp increase in demand for building materials and thus to strained capacity. As a consequence, prices of lumber, wallboard, cement, insulation, and related products rose steeply.

Moreover, although productive capacity was not generally strained over the past year, continued growth of industrial production at rates experienced

Chart 3

Capacity Utilization Rates

PERCENT^{1/}

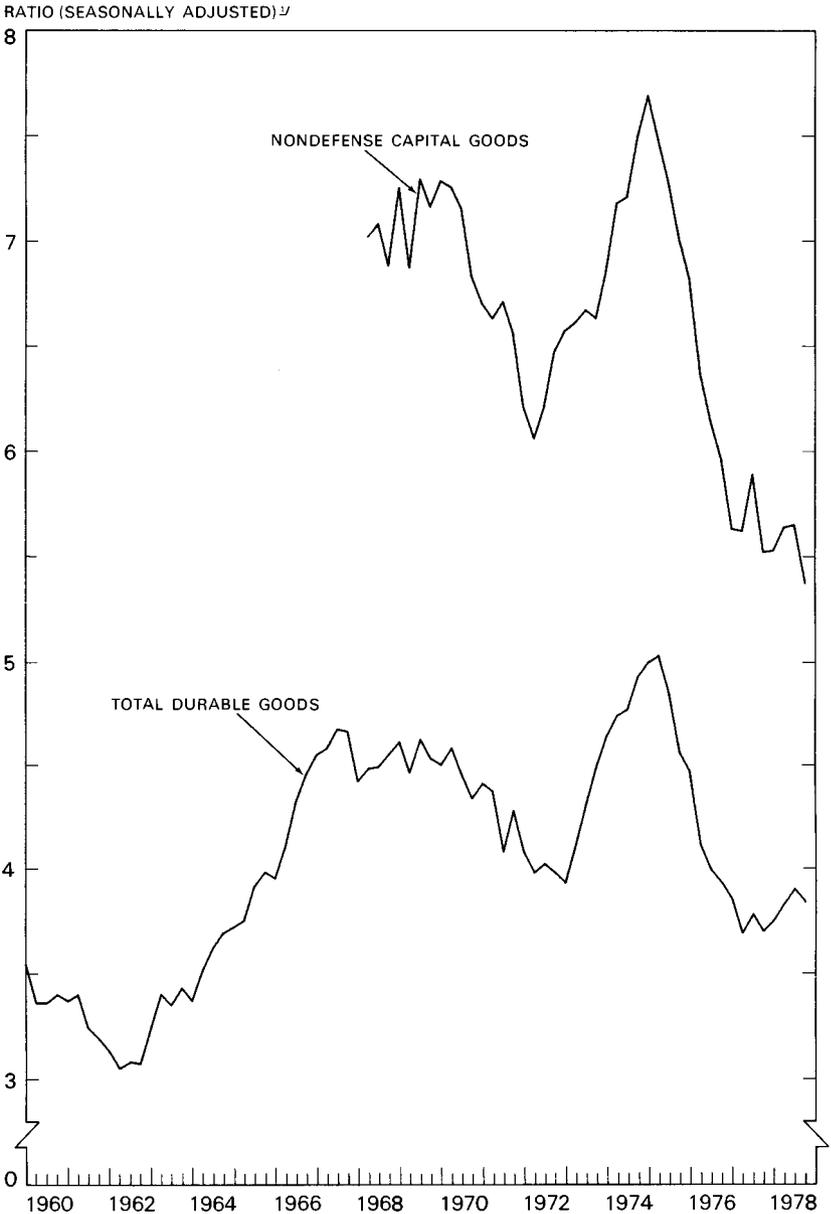


^{1/} SEASONALLY ADJUSTED.

SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM.

Chart 4

Unfilled Orders-Shipments Ratio, Durable Goods Manufacturing



SOURCE: DEPARTMENT OF COMMERCE.

in 1978 would move utilization rates into the range associated with excess demand pressure on prices.

Pattern of Wage Behavior

Wages began to accelerate early in 1978. The exact quarterly pattern and degree of acceleration vary according to the measure of the rate of wage increase, but all broad indicators show a similar pattern of wage acceleration in late 1977 and early 1978 (Table 13). For the second half of the year, wage increases were lower than in the first, but still above the 1976 and 1977 experience.

TABLE 13.—*Selected measures of the rate of wage increase, private nonfarm economy, 1976–78*

[Percent change; quarterly data are annual rates]

Measure	1976	1977	1978 ¹	1978			
				I	II	III	IV ¹
Average hourly earnings ²	7.6	7.7	8.8	8.4	10.1	7.8	8.9
Adjusted hourly earnings index ^{2,3} ...	7.4	7.5	8.2	9.2	8.4	7.3	7.9
Employment cost index ⁴	7.2	7.0	8.0	7.8	8.7	8.2	(⁵)
Union.....	8.1	7.6	7.9	6.6	8.2	8.7	(⁵)
Nonunion.....	6.8	6.6	8.0	9.1	9.1	7.8	(⁵)

¹ Preliminary.

² Annual changes are measured from fourth quarter to fourth quarter; quarterly changes for 1978 are from preceding quarter. Data are seasonally adjusted.

³ This index, unlike the average hourly earnings series above it, excludes overtime pay in manufacturing and is adjusted to eliminate the effects of interindustry employment shifts.

⁴ Changes for 1976 and 1977 are measured from December to December; change for 1978 is from September 1977 to September 1978; quarterly changes are within quarter. Data are not seasonally adjusted.

⁵ Not available.

Source: Department of Labor, Bureau of Labor Statistics.

The pattern of acceleration and subsequent deceleration in the first 3 quarters of the year was dominated by the behavior of wages of nonunion workers. In early 1978, for the first time in several years, nonunion wage rates increased faster than union rates. This development is normal in labor markets when unemployment falls, and the 15.2 percent increase in the minimum wage for nonfarm workers on January 1, 1978, undoubtedly contribute to the high rate of nonunion wage increases in the first half of the year.

The difference between union and nonunion wage changes in 1978 was also influenced by the collective bargaining calendar: comparatively few major contracts (those covering 1,000 or more workers) were scheduled for renegotiation in 1978. Since increases tend to be largest in the first year of a collective bargaining contract, years of light bargaining generally are years of lower average wage increases for union members. Wage adjustments for union workers may be attributed to three different sources: current settlements, past settlements (those that provide for deferred increases), and automatic cost-of-living escalators (Table 14). For the first 9 months of 1978, the portion attributable to current settlements was down sharply from its

1977 level, while that attributable to past settlements and automatic cost-of-living escalation was greater than in 1977. The decrease in the current settlement portion came about solely because there were fewer new labor agreements, not because the average wage increases granted in new settlements were smaller. As the lower part of Table 14 shows, the new settlements reached in 1978 in major contracts provided for somewhat larger first year increases than settlements in 1977 had done.

TABLE 14.—*Mean wage and benefit adjustments in major collective bargaining agreements, 1976–78*

[Percent]

Type of change	1976	1977					1978 ¹			4 quarters ended	
		I	II	III	IV	Year	I	II	III	Sept. 1977	Sept. 1978 ¹
Effective wage-rate changes:²											
Total effective adjustments.....	8.1	1.2	2.9	2.7	1.1	8.0	1.3	2.6	2.5	8.3	7.5
Adjustment resulting from:											
Current settlement ³	3.2	.3	1.0	1.3	.5	3.0	.5	.6	.5	3.5	2.1
Prior settlement.....	3.2	.5	1.4	1.0	.3	3.2	.6	1.4	1.1	3.3	3.4
Escalator provision.....	1.6	.3	.6	.5	.3	1.7	.3	.5	.9	1.7	2.0
Increases in new settlements:⁴											
Wage rate settlements (1,000 or more workers):											
First-year adjustment.....	8.4	7.7	7.9	7.8	7.8	7.8	9.9	6.9	7.5	7.7	7.8
Average over life of contract.....	6.4	6.7	5.9	5.5	5.8	5.8	7.3	6.1	6.3	5.6	6.3
Wage and benefit settlements (5,000 or more workers):											
First-year adjustment.....	8.5	9.0	8.9	10.2	9.5	9.6	14.6	6.7	7.0	8.8	9.1
Average over life of contract.....	6.6	7.5	6.0	6.2	6.3	6.2	8.5	5.9	5.7	6.0	6.5

¹ Preliminary.

² Effective wage rate changes are wage rate changes actually going into effect per worker under major contracts in the respective quarters. Detail may not add to total because of rounding.

³ Changes resulting from collective bargaining settlements made that calendar year.

⁴ Quarterly data are at annual rates.

Note.—Quarterly data are not seasonally adjusted.

Source: Department of Labor, Bureau of Labor Statistics.

In comparison with 1977 settlements, labor contracts concluded in 1978 show an acceleration in wages over the life of the contract. Wage rate adjustments in new settlements averaged 7.8 percent for the first year and 6.3 percent annually over the life of the contract during the year ending in the third quarter of 1978, compared to 7.7 percent for the first year and 5.6 percent over the life of the contract for the same period a year earlier. (These measures exclude cost-of-living adjustments tied to the future rate of price inflation.)

There is considerable evidence that the responsiveness of wages to overall changes in economic conditions is significantly greater in nonunion than in unionized labor markets. Changes in average wage rates paid to union members are not significantly related to the contemporaneous unemployment rate or alternative measures of labor market pressure, although they are sensitive to price changes because of cost-of-living adjustments. Most of the inertia in average union wages is a by-product of multiyear labor agree-

ments, in which the size of agreed wage increases is more closely tied to economic conditions during and immediately preceding the renegotiation of a contract than to conditions during the term of the agreement.

Wage increases during the first year of a collective bargaining agreement are about as responsive to labor market pressures as nonunion wages. Increases over the life of the agreement, however, are much less strongly related to underlying market pressures prevailing at the time the contract is signed, and deferred increases are essentially independent of prevailing market conditions. Consequently new inflationary pressures show up much more gradually in union than in nonunion wages. Conversely, when the initial causes of inflation subside, the moderating effect is less evident in union wage increases than in nonunion. Multiyear collective bargaining agreements can therefore be an important source of wage inertia.

How Tight Were Labor Markets in 1978?

With unexpectedly slow growth of labor productivity, labor demand was strong, and the reduction in the unemployment rate early in the year exceeded expectations. Nevertheless the 6.2 percent unemployment rate experienced in the first quarter of 1978 was higher than most estimates of the rate of unemployment at which inflation will begin to accelerate. In the remaining quarters of 1978 the rate was lower but relatively stable within a range of 5.8 to 6 percent.

One approach to the question of labor market pressure is to examine how closely labor markets in late 1978 resemble those of earlier periods of accelerating wages. During 1978 the overall unemployment rate was above the levels associated with accelerating wages in the late 1960s and mid-1970s (Chart 5). Such a comparison could be deceptive, however, because the demographic composition of the labor force has changed. Certain demographic groups have higher rates of turnover and therefore higher rates of unemployment, and these groups now make up a larger proportion of the labor force than in the past.

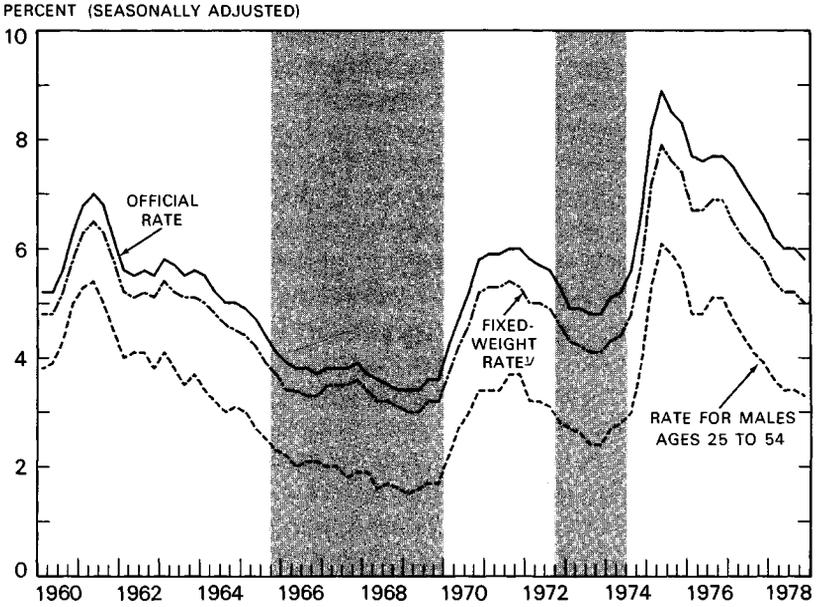
A better indicator of labor-market pressure is a fixed-weight index, constructed so that each demographic group has the same amount of influence in each year as it had in a high-employment period like 1956, when the aggregate unemployment rate was 4.1 percent. The fixed-weight unemployment rate has fallen relative to the official rate over the past decade, but in 1978 the fixed-weight rate was still somewhat above the levels of earlier periods of tight labor markets.

A third measure of labor market pressure is the unemployment rate of a group of experienced workers with continuous labor force attachment, such as the rate for men between the ages of 25 and 54. That rate, too, is still somewhat above the levels associated with prior wage accelerations.

Tight conditions in labor markets also affect labor turnover rates. As the number of job vacancies rises relative to the number of unemployed, employers first call back former jobholders; but when these are no longer avail-

Chart 5

Selected Unemployment Rates



THE FIXED-WEIGHT UNEMPLOYMENT RATE IS CONSTRUCTED UNDER THE ASSUMPTION THAT THE COMPOSITION OF THE LABOR FORCE WITH RESPECT TO SEVEN DEMOGRAPHIC GROUPS REMAINS UNCHANGED OVER THE PERIOD SINCE 1956.

NOTE: SHADING INDICATES PERIODS OF ACCELERATING WAGES.

SOURCES: DEPARTMENT OF LABOR AND COUNCIL OF ECONOMIC ADVISERS.

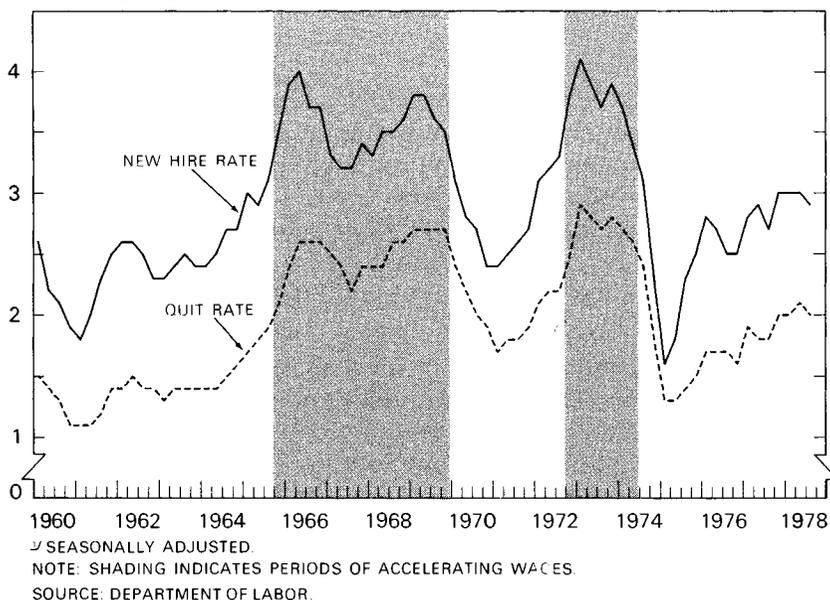
able, vacancies are filled by hiring from the pool of unemployed and by bidding workers away from other employers with offers of higher wages and other benefits. In response to these incentives, a larger number of workers quit their current jobs and take better-paying ones. As a result, both the new hire and quit rates in manufacturing tend to rise as labor markets tighten and wages accelerate. Both rates have reached postwar peaks in periods of very tight labor markets during the past decade. As seen in Chart 6, however, the rate of new hiring in late 1978 was below these levels.

Over the past decade the composition of the work force has shifted toward young and inexperienced workers, who tend to quit their jobs more frequently in the search for better employment. The quit rate associated with a given degree of labor market pressure has therefore drifted up over the past decade. Although measured quit rates were relatively high in late 1978, they do not necessarily imply as much labor market pressure as they would have done at these levels in the mid-1960s.

Although the measures of labor market tightness examined above did not reach levels associated with accelerating wages in the past, that fact alone is not sufficient to determine that excess demand was absent from

Chart 6

New Hire and Quit Rates In Manufacturing

RATE PER 100 EMPLOYEES^{1/}

labor markets during 1978. There is some evidence, for example, that even the fixed-weight and prime-age male unemployment rates associated with accelerating inflation have moved upward over time (Chart 5). Some analysts have suggested that increases in the level, duration, and availability of unemployment benefits and other transfer payments have raised the unemployment rates for some groups in the labor force by facilitating longer and more frequent periods of job search. These factors, together with changes over time in the structure of labor markets, in rates of productivity growth, and in the reaction of wages to past and expected rates of inflation, make it difficult to estimate the rate of unemployment below which wage acceleration is likely to occur. A number of studies have attempted to determine that rate, but have produced a wide range of results.

Although it is impossible to estimate the precise rate of unemployment below which wages begin to accelerate, an analysis by the Council of Economic Advisers and a review of the available studies do identify a range of estimates that encompasses the consensus of most observers. The evidence suggests that under current labor market conditions the danger of accelerating wages begins to mount as the rate of unemployment falls significantly below 6 percent. During 1978 the unemployment rate moved into the top of the range. The economy also underwent an acceleration of wages. But since the range itself is uncertain, we cannot automatically conclude that the lower unemployment rate caused the acceleration. A more careful look at developments is necessary.

CAUSES OF WAGE ACCELERATION

The pattern of union and nonunion wage increases in 1978 is consistent with the view that tightening labor markets were a partial source of wage acceleration. But the moderation of the rate of increase in wage rates after the first quarter casts doubt on the hypothesis that the unemployment rate had declined to levels producing a sustained acceleration of wages and prices. It suggests that the acceleration of wages in early 1978 may derive from other factors.

To explore these issues the Council conducted an econometric analysis of several potential explanations for the 1978 wage acceleration. The analysis examined two aspects of labor market pressure: the general balance between the demand for and supply of labor resources represented by the level of the unemployment rate, and the more transitory pressures generated by the rapidity with which unemployment decreases as employment gains exceed labor force growth.

The rapid drop in unemployment in late 1977 and early 1978 was accompanied by a sharp growth of employment. It is quite possible that a very rapid rise in the demand for labor relative to the increase in the labor force may cause an acceleration in wages, even though the level to which unemployment falls does not imply excess demand for labor. A large increase in hiring, occurring in a short period and spread across a large number of industries, causes many workers to leave low-wage jobs as high-wage vacancies appear. Employers in low-wage industries face a special difficulty when they must not only add to their work force but replace those who have quit to accept higher-paying jobs. Wage rate increases may therefore be particularly large in low-wage industries. While ultimately the pool of unemployed might be enough to fill the new jobs without putting added pressure on wage rates, the attempt to hire large numbers of workers quickly sets up temporary imbalances in labor demand and supply that accelerate wage increases.

The Council's analysis confirmed that the *level* of the unemployment rate early in the year played a limited role in the 1978 wage acceleration. However, pressures associated with the *speed* of the decline in unemployment were an important source of increased wage inflation. The rapidity of the reduction in the unemployment rate added about 0.1 percent to the adjusted hourly earnings index during the fourth quarter of 1977 and another 0.3 percent during the first half of 1978, according to estimates made by the Council. During the second half the unemployment rate held fairly steady, and the absence of further pressure from this source contributed to deceleration of wage increases late in the year.

A second important factor in the wage acceleration was the minimum wage increase in January 1978. According to the Council's analysis, between 0.2 percent and 0.4 percent was added to the adjusted hourly earnings index in the first quarter by the change in the minimum wage. If the minimum had not been raised, the index would have risen at an annual rate of around

7.9 percent in the first quarter instead of the 9.2 percent that actually occurred. Thus, over two-thirds of the acceleration of the index in the first half of the year can be explained by the combined effects of the speed with which unemployment declined and the increase in the minimum wage.

In summary, in late 1977 and early 1978 a marked but temporary acceleration of wages followed a rapid fall in unemployment. The acceleration reflected the influence of minimum wage increases and the unusual growth of demand for labor during late 1977 and early 1978. The acceleration also occurred at a time when productivity growth was very low, and the two developments together added strong impetus to cost and price increases. Although the rapidity of the drop in unemployment put some transitory pressure on wage rates, the level of the unemployment rate during that period was still above most estimates of the range associated with a sustained increase in inflation. Later in the year, however, the recovery clearly brought the unemployment rate into the top of that range. In view of the acceleration in inflation which has occurred, a further reduction of the unemployment rate during 1979 would run some risk of generating excess demand and creating inflationary pressures in labor markets.

THE PRODUCTIVITY SLOWDOWN

Productivity growth in 1978 showed a very marked slowdown from accustomed rates, adding substantially to inflationary pressures and raising fundamental concerns about underlying trends. With real GNP growth of about 4 percent over the year, exceeding the normal trend rate of growth, most observers expected that productivity in the private nonfarm sector would grow at least 2 percent. Instead, as seen in Table 15, productivity showed essentially no improvement, increasing only 0.6 percent in the course of the year. The slowdown was concentrated in the nonfarm, nonmanufacturing sector, where productivity actually declined 0.3 percent during 1978. Productivity growth in manufacturing, on the other hand, was strong.

The slow productivity growth over the past 2 years adds to the accumulating evidence that the underlying trend in productivity growth since 1973 has been substantially lower than in earlier periods. Between 1948 and 1965, productivity growth in the private nonfarm sector averaged 2.6 percent per year. In 1965-73 this rate declined to 2.0 percent. Since 1973, private nonfarm productivity growth has averaged less than 1 percent per year. In the following examination of recent evidence on productivity growth and the discussion of its implications for the growth of potential output, the key questions raised by recent experience are these: Was the recent poor performance a nonrecurrent extraordinary event, from which we will soon bounce back? Or does the recent lag in productivity indicate that the U.S. economy has entered a period of very slow productivity growth?

Productivity Determinants

During most of the postwar period the economy produced productivity gains exceeding 3 percent annually, as shown in Table 15. However, a number of the factors generating the strong productivity growth between World War II and the mid-1960s have since been reversed.

TABLE 15.—*Labor productivity growth, 1948–78*
[Percent change per year]

Sector	1948 to 1955	1955 to 1965	1965 to 1973	1973 to 1977	1977 to 1978 ¹
Private business economy.....	3.4	3.1	2.3	1.0	0.4
Nonfarm.....	2.7	2.6	2.0	.9	.6
Manufacturing.....	3.3	2.9	2.4	1.5	2.5
Nonmanufacturing.....	2.4	2.4	1.7	.6	— .3

¹ Preliminary.

Note.—Data relate to output per hour paid for, for all persons.

Source: Department of Labor, Bureau of Labor Statistics.

For example, between 1948 and 1973 high rates of private investment led to a growth in the capital-labor ratio (measured by the ratio of the net nonresidential capital stock to aggregate hours worked in the private non-farm sector) amounting to almost 3 percent per year. Since 1973, as a result of low rates of investment, that growth rate has dropped to 1¾ percent per year. Although the precise effect of slower growth in the capital stock is hard to measure empirically, analytical studies estimate that it could well have reduced productivity growth by up to one-half of a percentage point per year from earlier trends.

Productivity growth has also been reduced by a dramatic shift in the age-sex composition of employment. Starting about 1965, the children of the postwar baby boom attained working age, adding many young and inexperienced workers to the labor force. Rapid increases in the labor force participation of women also added to the supply of less experienced workers. If average earnings of each age-sex group are used as a rough approximation of the relative productivity of its members, losses in productivity growth due to increases in the proportion of young and inexperienced workers in the labor force may be calculated. Such demographic shifts in employment can explain a reduction of 0.4 percentage point in the annual growth rate of productivity between 1965 and 1973. Since 1973 this trend has slowed as the new workers that entered the labor force between 1965 and 1973 have become older; and, for the more recent period, the reduction has been closer to one-third of a percentage point.

Increased economic and social regulation has aggravated the productivity slowdown in a number of ways. Productivity is a measure of output produced per unit of resources used in production. Economic regulation, as in transportation, precludes labor and capital from flowing to those uses that

have a relatively high value. The effects of social regulation are more complicated. The gains from social regulation—in such forms as reduced pollution and greater safety—are generally not included in measured output. When an increasing fraction of society's labor and capital resources is diverted to producing these gains, measured productivity growth is reduced.

In addition, important indirect costs are generated by social regulation. The implementation of new regulatory statutes is often associated with considerable litigation and uncertainty which tends to reduce innovation and investment. Moreover, some regulations specify or suggest the technology to be used to meet new standards, rather than prescribing a level of performance to be attained. As a consequence, innovations that could meet the standards at lower cost are not encouraged.

On an aggregate basis one private study estimates that for 1968–73 the direct costs of compliance with environmental, health, and safety regulations may have reduced the annual growth of output relative to total inputs in the private nonfarm sector by 0.1 percentage point. Similar estimates for 1973–78 are incomplete, because of lags in the compilation of data, but according to preliminary estimates these restrictions may have subtracted an additional 0.3 percentage point from annual growth of output relative to inputs since 1973.

Productivity growth has fallen significantly in many industries over the past several decades. (See Table 16.) The costs of regulations have increased substantially in some of these industries but not in others. For example, from 1950 to 1965 labor productivity in mining grew 4.3 percent per year, but since 1973 it has declined at an annual rate of 6.1 percent. In the late 1960s and early 1970s stringent mine safety laws began to take effect. Some part of the productivity decline in mining can be attributed to other factors, and there have been such measurable benefits as lower accident rates, but regulation has undoubtedly been very costly in terms of real output per hour worked. In the utilities sector, growth in output per hour worked fell successively from 6.1 to 3.5 to 0.2 percent per year in 1950–65, 1965–73, and 1973–77. While a number of influences have been at work to reduce productivity growth in this industry, the increase in environmental regulation had an important bearing.

The loss of productivity growth as a consequence of increasing social regulation does not itself imply that the costs of regulation exceed its benefits. It has already been noted that the output measures generally used to calculate productivity do not include environmental improvements and other benefits of regulation. Nevertheless, the magnitude of the productivity effects does highlight two facts: regulation is very costly; and benefits should be closely compared with costs in the design of regulatory legislation and specific regulations.

Some have suggested that a decline in the intensity of research and development in the United States may be a significant cause of the productivity slowdown. The evidence for such a view lies in the falling ratio of research

and development expenditures to total output; this ratio reached a peak of 3.0 percent in 1964, but has since dropped to an estimated 2.2 percent in 1978. Most of the reduction can be attributed to a substantial cutback in military and space-related research—research that may have a somewhat less direct effect in increasing aggregate output per hour worked in the private sector than basic research or private research and development. Private industry has consistently provided about 1 percent of GNP for research and development since the mid-1960s. In the course of time, however, the direction of industry's research and development activity may have shifted away from basic research and new product development in response to such influences as the changed regulatory environment.

Little of the 1965–73 decline in private nonfarm labor productivity or the further reduction in 1973–78 seems to stem from shifts in the industrial composition of employment. Although movement out of the farm sector added a sizable productivity bonus in the early postwar years, this process had ended by the mid-1960s. Further, even though the proportion of the work force engaged in manufacturing has grown smaller since 1965, the level of manufacturing productivity has been about the same as that of the private nonfarm sector as a whole; the sectors of the economy employing larger proportions of the work force include some with higher and some with lower levels of productivity, and hence the shift has left aggregate productivity more or less unchanged.

Productivity Growth Since 1973

Productivity growth in the nonfarm business sector since 1973 has been unusually erratic. Although growth during 1976 was in line with the 1965–73 trend, there were abnormally low growth and even declines in 1973–74 and 1977–78. The productivity decline in 1973–74 was particularly striking. Labor productivity in the nonfarm business sector fell in every quarter from the second quarter of 1973 to the fourth quarter of 1974, dropping a total of 4.2 percent in a 7-quarter period. On the basis of the usual relationship between fluctuations in productivity and fluctuations in output, no more than 1 percentage point of that decline could be attributed to the sharp recession during the period. The additional drop of 3.2 percentage points accounts for much of the difference between the expected 2 percent annual growth rate between 1973 and 1977 and the 0.9 percent rate that actually occurred.

In both 1977 and 1978, productivity growth was again disappointing. Although private nonfarm productivity was expected to increase at least 2 percent per year, it grew instead at only 1.3 percent in 1977 and 0.8 percent in 1978. This latest deterioration in productivity indicates that the slowdown in 1973–74 was not just a temporary aberration and adds to the accumulating evidence that the secular trend in productivity growth may be considerably less than 2 percent per year.

Recent deviations of productivity from its postwar trend have been so pronounced that one is tempted to search for the influence of special factors. Some suggest that the oil embargo of 1973-74 and the subsequent quadrupling of oil prices had an adverse impact on productivity growth. However, it is difficult to find a mechanism by which an oil crisis could have such an immediate and severe effect on the economy. Widespread declines in productivity growth rates would only occur as adjustment of production methods to economize on energy took place. Actually, adjustment to the new oil prices has been extremely slow. Moreover other countries in which energy prices rose more than in the United States did not show such large productivity declines. In general, possible productivity-reducing effects occur as firms substitute labor or cheaper fuels for oil, or as energy-inefficient plant and equipment are replaced, but these effects will be spread very gradually over a long period.

There is no obvious set of special factors that could explain the poor productivity record of 1978. Year-to-year variations, however, have always been substantial, and deviations from trend of as much as 1 percentage point are not unusual. If the long-term growth rate of productivity has fallen well below earlier rates, as now seems likely, a year with a very small increase in production should occasion little surprise.

Part of the decline in the growth of private nonfarm productivity between 1965 and 1973 was attributable to reduced productivity gains in the con-

TABLE 16.—*Productivity growth by industry, 1950-77*

[Percent change per year]

Industry	1977 output share (percent) ¹	1950 to 1965	1965 to 1973	1973 to 1977
Agriculture.....	2.9	4.9	3.6	3.0
Mining.....	1.5	4.3	1.9	-6.1
Construction.....	4.3	3.4	-2.1	.3
Manufacturing:				
Nondurable.....	9.9	3.2	3.3	2.2
Durable.....	14.4	2.5	2.2	1.2
Transportation.....	3.9	3.0	2.9	1.0
Communication.....	3.2	5.3	4.6	6.7
Utilities.....	2.3	6.1	3.5	.2
Trade:				
Wholesale.....	7.3	2.6	3.4	-.8
Retail.....	10.0	2.3	2.1	.8
Finance, insurance, and real estate.....	15.4	1.6	.2	2.3
Services.....	12.0	1.2	1.7	-.3
Government.....	12.5	.4	.5	.1
All industries:				
Current weights.....	100.0	2.7	2.0	1.1
Fixed weight (1977 output weights).....		2.6	1.9	1.1

¹ Detail may not add to 100 percent because of rounding.

Note.—Growth data relate to output per hour worked for all persons.

Sources: Department of Commerce (Bureau of Economic Analysis) and Council of Economic Advisers.

struction and financial sectors. Statistics on productivity in these sectors (and those in the government sector) are notoriously bad, and so it could be argued that the apparent reduction in productivity growth during this period was a statistical artifact. However, the further widespread decline since 1973 lends no support to that interpretation.

Table 16 shows the pattern of labor productivity growth (gross product originating per hour worked) for 13 major industries. In almost every sector of the economy the growth of productivity has slowed appreciably. Data for 1978 are not yet available; but, given the aggregate productivity performance last year, sectoral averages for 1973–78 will be even lower than for 1973–77, except perhaps in manufacturing.

POTENTIAL GNP

Behavior Since 1973

The erratic productivity performance of the last 5 years raises serious questions about earlier estimates of the economy's productive potential. Potential GNP is defined as the level of real output that the economy could produce at high rates of resource utilization. The *level* of potential output is less meaningful than its *rate of growth*. The latter gives the best estimate of how much the economy can actually grow over the next few years without putting additional pressure on labor or product markets. Before making a judgment of the future trend for potential output, it is useful to review the growth of potential over the last 5 years and to examine recent behavior of the unemployment rate.

The Council of Economic Advisers has undertaken several reexaminations of the conceptual as well as the empirical basis of potential output over the last 3 years. These studies led to a significant reduction in 1977 in the estimate of the growth of potential, lowering the estimate to 3½ percent annually for the period from the fourth quarter of 1968 onward. Previously, the growth rate of potential had been estimated to be 4 percent for the period from the fourth quarter of 1968 to the fourth quarter of 1975 and 3¾ percent thereafter. The 1977 revision, discussed in the 1977 and 1978 *Economic Reports*, puts the potential GNP in 1978 at \$1,462 billion (1972 prices), about 5.6 percent higher than actual GNP.

The 1977 and 1978 estimates were based on a higher benchmark unemployment rate and on the optimistic assumption that the productivity decline in 1973–74 was an aberration that would be subsequently corrected. The underlying productivity trend was therefore assumed to be equal to that observed between 1965 and 1973. For that assumption to prove correct, strong increases in productivity would have had to occur since 1974. Productivity growth in 1975 and 1976 did show substantial improvement, keeping open the possibility that productivity would return to the level indicated by the 1965–73 trend; and early in 1978 initial productivity statistics suggested a sizable 3 percent gain for 1977. However, the subsequent down-

ward revision of the productivity statistics for 1977 and the very poor productivity performance of 1978 make the earlier view untenable. It no longer seems reasonable to assume that the exceedingly poor productivity growth in 1973-74 and 1977-78 represented statistical aberrations or one-time events, implying no reduction in the long-term trend. Downward revisions of our estimate of long-term productivity growth and of potential GNP are clearly necessary.

The uncertainty about the growth of potential output over the 1973-78 period requires one to distinguish three factors affecting productivity: its long-term trend, its cyclical movements, and the erratic declines from trend that occurred in 1973-74 and to a lesser extent in 1977-78.

It is possible to place rough bounds on the range in which the 1973-78 trend of productivity growth must lie by examining two separate views. The optimistic view holds that 1973-74 was a period in which productivity and potential output dropped as a result of nonrecurring factors affecting the level of productivity, after which the long-term trend of productivity growth resumed its earlier pace. On this basis we calculate the long-term trend rate of growth in productivity from 1973 to 1978 to be about 2 percent per year and the growth of potential GNP over this period to be 3.5 percent per year. Such a view of productivity behavior interprets the 1977-78 performance as another marked aberration, which has temporarily reduced productivity well below its long-term trend.

The pessimistic view holds that the 1973-74 period was not extraordinary. According to this view long-term productivity growth began to slow substantially after the mid-1960s, although unexpectedly favorable developments in late 1972 and in early 1973 disguised the fact. The poor average performance of productivity since early 1973 reflects that slowdown, and the particularly disappointing episodes in 1973-74 and 1977-78 are fluctuations around a greatly reduced long-term trend. According to this interpretation the estimate of potential should be based on a long-term growth of productivity which follows a much slower pace after 1973. This pessimistic version produces an estimated long-term trend rate of productivity growth during the past 5 years of around 1 percent a year, and a growth of potential GNP of only 2.5 percent annually over the 1973-78 period.

Placing an exact number on recent potential growth is extremely difficult. The growth of potential from 1973 to 1978 probably falls between the two extremes. The 1973-74 productivity shock was to some extent nonrecurrent. But the deceleration in productivity in recent years is too striking to ignore in estimating the long-term trend.

Unemployment Forecasts

Another way of analyzing the growth of potential output over the 1973-78 period is to examine the actual behavior of real GNP and unemployment in this same period. Particularly since mid-1977, the behavior of the unemployment rate has been a puzzle. In the economic forecasts underlying

the 1979 budget, for example, real GNP was forecast to rise 4.7 percent over the 4 quarters of 1978 and an additional 4.7 percent in 1979. On the basis of estimates that assumed a potential growth of 3.5 percent per year, the unemployment rate was forecast to reach 5.8 percent in the fourth quarter of 1979. In fact, it reached that level a year earlier, even though real GNP growth in 1978 was less than expected.

The most common method of forecasting the unemployment rate relates that rate to the gap between actual and potential GNP—the relationship known as Okun's law. Over the postwar period a cyclical coefficient of $2\frac{1}{2}$ has been observed; that is, a reduction of $2\frac{1}{2}$ percentage points in the gap between potential and actual GNP could be expected to lower the unemployment rate by about 1 percentage point. Although aggregate data may be unreliable, there is some suggestion that the cyclical coefficient was closer to 3 in early years and may have declined to near 2 in the 1970s.

The use of this relationship and previous estimates of potential GNP produced substantial overestimates of the unemployment rate in 1977 and 1978. For example, from the fourth quarter of 1976 to the fourth quarter of 1977, real GNP grew 5.5 percent, reducing the estimated GNP gap by 2 percentage points under the old definition of potential. The expected reduction in the unemployment rate was 0.8 percentage point; the unemployment rate actually fell by 1.2 percentage points.

Last year produced a similar surprise: a 4.3 percent increase in real GNP with a 3.5 percent growth of potential output should have lowered the unemployment rate from 6.6 to 6.3 percent from the fourth quarter of 1977 to the fourth quarter of 1978. Instead, the unemployment rate was reduced to 5.8 percent, 0.5 percentage point more than expected. Given the unemployment rate at the end of 1976 and the actual path of output since then, unemployment by the end of 1978 was 0.9 percentage point lower than was expected, if it is assumed that potential GNP grew at 3.5 percent per year. By revising downward our estimate of the growth of potential GNP from 3.5 to 3.0 percent per year, about half the unanticipated drop in the unemployment rate can be explained. The remainder is within historical error margins for the output-unemployment relationship.

Revised Estimates

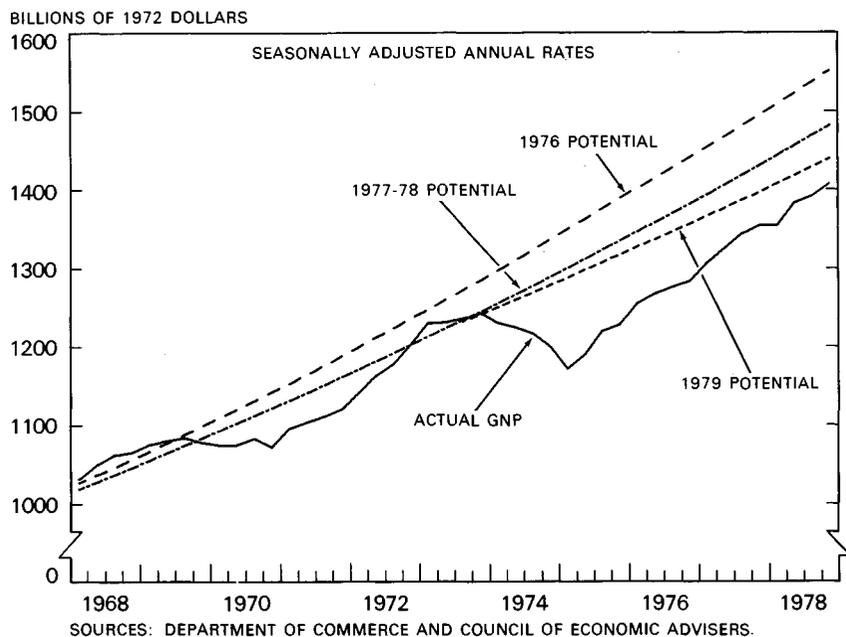
Weighing recent trends in productivity and labor force growth, as well as the unemployment-output relation, one can form a rough judgment about the trend in potential output over the 1973–78 period. Clearly, placing an exact number on potential growth is very difficult. On balance the Council's view is that potential output has grown at an average rate of 3 percent during the last 5 years.

The 3 percent overall growth rate of potential between 1973 and 1978 can be broken down into the following components: a 2.5 percent annual growth in potential employment, a 0.5 percent per year decline in annual hours per employee, and a 1 percent per year growth in productivity. Reflect-

ing the large decline in 1973-74, the 1 percent productivity growth during the past 5 years was about one-half of 1 percentage point below our estimate of the long-term trend (discussed below). But its effect in depressing potential GNP was offset by an annual growth in the labor force about one-half of 1 percent above its long-term trend.

Chart 7

Actual and Potential Gross National Product



The latest estimate puts potential GNP at \$1,423 billion in 1978. Chart 7 shows the latest revision of potential output (labeled 1979 potential) along with the two earlier versions. The revised data are in Table 17. Actual GNP in 1978 was only about $2\frac{3}{4}$ percent below its potential level.

TABLE 17.—Potential gross national product and benchmark unemployment rate, 1973-78

[Billions of 1972 dollars, except as noted]

Year	Potential GNP	Actual GNP	GNP gap (potential less actual)	Benchmark unemployment rate (percent)
1973.....	1,227.0	1,235.0	-8.0	4.9
1974.....	1,264.2	1,217.8	46.4	5.0
1975.....	1,302.1	1,202.3	99.8	5.1
1976.....	1,341.1	1,271.0	70.1	5.1
1977.....	1,381.4	1,332.7	48.7	5.1
1978.....	1,422.9	1,385.1	37.8	5.1

¹ Preliminary.

Sources: Department of Commerce (Bureau of Economic Analysis) and Council of Economic Advisers.

Future Trends

Projecting potential GNP growth into the future is subject to large errors. Growth of the labor force in recent years has varied substantially. In the past 5 years, the surprisingly low productivity growth has been offset, as noted above, by higher than expected increases in the labor force, producing more growth in potential output than would have seemed likely from the low productivity statistics alone.

The wide variation in productivity growth rates since 1973—and our inability to determine precisely the underlying trend of such growth during these years—make predicting future rises in private nonfarm productivity unusually hazardous. Improved growth in investment during the past 2 years should help to improve productivity growth over the next 5 years. At the same time, labor force growth should decline when the young people born in the baby boom have entered the labor force. This demographic reversal should also add to productivity growth, as the drop in the average age and experience of the labor force tapers off. These positive developments, however, may well be offset to some extent by increased regulatory burdens.

Studies by the Council of Economic Advisers indicate that the range of estimates of productivity growth per hour lies between $1\frac{1}{4}$ and $2\frac{1}{4}$ percent annually over the next 5 years. These estimates are based on the alternative hypotheses about the 1973–74 period discussed earlier. Taking account of recent disappointing productivity developments, our forecast is for a productivity growth of $1\frac{1}{2}$ percent annually over the next 5 years. This projection is based on the view that some part—less than half—of the 1973–74 drop in productivity represents nonrecurrent events; in addition, it does not assume any rebound of productivity growth from recent trends back toward those experienced in the 1950s or 1960s.

Other components of anticipated potential growth over the next 5 years are these: an expected fall in hours per employee of one-half of 1 percent annually; an average rise in the labor force participation rate of three-fourths of 1 percent annually; and a rise in the relevant population averaging $1\frac{1}{4}$ percent annually.

Taken together these components imply a growth in potential output over the 1978–83 period of 3 percent annually, the same as the revised estimate for 1973–78. It is recognized that we are in a period of adjustment to new trends in energy, regulation, and international competition, that an attempt to estimate the underlying trend is therefore extremely hazardous, and that estimates of productivity growth are particularly subject to large margins of error.

ECONOMIC POLICY IN AN INFLATIONARY ENVIRONMENT

In recognition of the need for a balanced approach to the problem of inflation, the Administration announced a three-part anti-inflation program

in October 1978. The program sets out the basic objectives for economic policy in 1979. As the first element of the program, fiscal and monetary policy will be used to achieve and maintain a balance between aggregate demand and supply that is conducive to a reduction in inflation. The second element is a set of explicit, voluntary wage and price standards designed to reduce inflation. The third consists of an effort to reduce the direct contribution of government to inflation by reducing the cost of regulatory actions. In the remainder of this chapter the policy initiatives associated with each element of the anti-inflation program are discussed.

AGGREGATE DEMAND POLICY

During the course of an economic recovery, a stage is reached at which the emphasis of macroeconomic policy must switch from efforts to strengthen growth in economic activity to measures that restrain inflation. The U.S. economy passed through that stage during 1978. The disappointing performance of productivity, the related sharp drop in unemployment, and the acceleration of inflation brought the economy to that position somewhat earlier and more abruptly than had been expected. Reducing inflation must be the top priority of economic policy in 1979. Unless we bring inflation under better control, the progress made during the past several years toward recovering full employment of our economic resources will be jeopardized.

Since the trough of the recession in early 1975, total real output of goods and services has grown at an annual rate of 5 percent, or about 2 percentage points per year faster than the economy's long-term potential. The gap between actual economic performance and the level made possible by our resource base has therefore steadily diminished.

Job creation during this recovery has proceeded at an extraordinarily rapid pace, especially during the past 2 years. Overall unemployment has therefore declined substantially despite record increases in the civilian labor force. Nevertheless, unemployment rates remain extremely high for some major segments of the population. Both here and abroad, structural unemployment represents an unacceptable waste of economic resources and a severe social problem. But the problem cannot be dealt with by an expansive aggregate demand policy without generating further inflationary pressures. As pointed out in Chapter 3, the task must be addressed with measures such as targeted employment tax credits and training and jobs programs aimed directly at those who cannot find jobs even in a relatively fully employed economy.

Earlier in this chapter evidence was cited that excess demand pressures in most labor and product markets were not a dominant factor in the recent acceleration of inflation, except for a period in late 1977 and early 1978 when the rapidity of decline in unemployment contributed to an acceleration of wage increases. But the analysis also indicated that the economy has approached the point where the overall margin of unused resources is very slim. By late 1978 the cyclical component of unemployment was down to relatively small proportions, as evidenced by various measures of labor

market tightness, and the gap between the economy's actual and potential output had shrunk from 7.7 percent of potential in 1975 to 1.8 percent in the fourth quarter of 1978. Moreover, the outlook for growth in productivity is very uncertain. Since we are not yet able to say precisely why productivity gains were so weak last year, we cannot be confident that our estimate of the GNP gap and our forecast of growth of potential GNP are correct.

For all of these reasons it is essential that economic policies be restrained. Economic growth must slow to a moderate and sustainable pace—one that avoids adding the effects of excess demand to existing inflationary forces.

As Chapter 3 describes in detail, the Administration is forecasting a growth rate of real GNP amounting to 2¼ percent over the 4 quarters of 1979 and 3¼ percent in 1980. The average growth rate over the 2 years, 2¾ percent, is slightly below the estimated long-term growth potential of 3.0 percent. If growth in the labor force and productivity is about in line with long-term trends, the margin of slack between actual and potential GNP will increase slightly over the next 2 years, and market forces can work together with the pay and price standards announced by the President on October 24 to moderate inflation.

Restrained fiscal and monetary policies are an essential ingredient of the Administration's strategy for combating inflation. Monetary and fiscal restraints alone, however, are not equal to the task of unwinding an inflation that has been under way for more than a decade and has become deeply embedded in expectations and in the normal way of doing business by consumers, workers, labor unions, and business establishments. Experience since the late 1960s, reviewed at the beginning of this chapter, amply bears out that conclusion.

The stubborn resistance of inflation to the traditional remedies reflects the fact that the rate of wage and price increase is relatively inflexible in the face of slack demand. As last year's *Economic Report* discussed in more detail, there is some evidence that wage rates over the past quarter century have become progressively less responsive to the balance between aggregate demand and supply in labor markets. Reductions in output and major increases in unemployment are no longer as effective in slowing the rate of wage and price increase. The resulting loss of output, of jobs, and of human dignity pays only modest dividends in lower inflation.

A political consensus exists in our country today that inflation is the Nation's most serious economic problem, and that fiscal and monetary discipline is needed if inflation is to be reduced. The inflationary problem can be dealt with most successfully by persisting with the discipline of anti-inflation policies for an extended period even if economic growth for a time should fall below the path that is now forecast. The chances of maintaining the necessary consensus long enough to make real gains against inflation will be much greater if we avoid an overdose of restraint that leads to sharp increases in unemployment, reductions in output, and stagnation of investment.

The Roles of Fiscal and Monetary Policies

The objective of aggregate demand policies for 1979 and 1980 is thus clear. To avoid creation of excess demand, economic growth needs to slow to a pace at, or somewhat below, the long-term potential rate of expansion. Fiscal and monetary restraint is needed to accomplish that aim. The restraint, however, must be applied in a measured way, to moderate growth without producing a recession.

As Chapter 1 indicated, the course of fiscal policy began to shift toward restraint during 1978. In fiscal 1979, the year beginning in October 1978, the budget deficit will decline to about \$37 billion, or \$11 billion less than in the prior fiscal year. In fiscal 1980 the deficit will drop an additional \$8 billion to a level of \$29 billion. Further reductions are expected in succeeding fiscal years. To reach these results we must keep a very tight rein on the growth of expenditures. In fiscal 1980, Federal outlays will decline to 21 percent of GNP from 22 percent in fiscal 1978.

Given the course of fiscal policy being pursued by the Administration, the task of reducing inflation will not fall on monetary policy alone. Success in the struggle against inflation will require that monetary and fiscal policies work together; the objective of slowing economic growth while avoiding a recession will necessitate very careful coordination and balance between fiscal and monetary policies.

The task of mapping the appropriate course of monetary policy will not be easy. Monetary restraint in 1978 did not affect aggregate demand in the way that past history would have suggested, nor will it do so in 1979 and 1980. As discussed in Chapter 3, institutional changes in financial markets, by altering the availability of credit to private borrowers, have reduced the degree to which changes in monetary policy affect spending. In today's economy, monetary and credit policies increasingly influence private investment and consumption through fluctuations in interest rates and associated movements in financial asset prices, rather than through changes in nonprice terms of credit.

This development has both negative and positive aspects from the standpoint of economic stabilization policy. On the negative side, monetary policy is likely to affect aggregate demand with even longer lags than it once did. Since our ability to forecast future developments is very limited, the task of identifying the appropriate course of monetary policy has become more difficult. On the positive side, however, monetary policy has been changed from a very harsh and selective tool of economic stabilization to one whose influence on aggregate demand is more gradual and evenly distributed. Working together with fiscal policy, monetary restraint, prudently applied, can be used more successfully than before to reduce economic growth to a modest but sustainable pace and thus create a favorable climate for an unwinding of inflation.

The American people and the Administration look forward to a decline in nominal interest rates from their present very high levels. It must be

clearly recognized, however, that a significant and lasting drop in interest rates cannot be expected until inflation begins to recede. When that happens, interest rates can and should decline. In a less inflationary environment it will also be possible to support adequate real growth with a slower expansion in the monetary aggregates than is currently required.

STANDARDS FOR WAGE AND PRICE BEHAVIOR

General macroeconomic policies can create an appropriate market environment for unwinding inflation. However, 10 years of inflation preclude achievement of a given deceleration of prices solely through aggregate demand policy without much more demand restraint and loss of growth than would have been the case in earlier periods. Unless ways are found to brake the momentum of self-perpetuating wage and price increases that have acquired a prominent place in our private behavior, inflation will continue at an unacceptably high rate.

In recognition of this fact the Administration at the beginning of 1978 called for a slowing of wage and price increases. Each company was asked to hold its 1978 price and wage increases below the average of the prior 2 years. Although some individuals and groups did make an effort to meet the standard, the program was not generally effective. The deceleration standard was not specific enough to provide a clear guide for wage and price decisions.

The Administration therefore incorporated more explicit standards into the anti-inflation program announced in late October. The voluntary program now includes an explicit numerical ceiling for wage and fringe benefit increases as well as a price deceleration standard for individual firms. The potential effectiveness of the program is heightened by expanded monitoring, by relating Federal procurement actions to the standards, and by an innovative program of real wage insurance designed to encourage compliance. The pay and price standards were published in preliminary form on November 7, followed by a 30-day period for public comment. On the basis of the comments offered, and after consultation with business and labor groups, some modifications in the detailed specifications were announced on December 13. The final standards were published in the *Federal Register* on December 28.

The pay standard limits the increase in hourly wages and private fringe benefit payments to a maximum of 7 percent for each employee group in a company. Employee groups subject to the pay standard are: (1) individual groups covered by major collective bargaining agreements; (2) other non-management personnel; and (3) management personnel. This grouping takes account of the differing institutional arrangements for setting wage rates and prevents an inequitable distribution of wage moderation. It also permits considerable flexibility in distributing wage changes among individuals within a group in response to economic circumstances, equity, and other factors, so long as the average increase for the employee group meets the standard.

In collective bargaining situations a newly negotiated contract in which wage and fringe benefit increases average no more than 7 percent annually over the life of the contract is consistent with the pay standard, provided that the increase is no greater than 8 percent in any year of a multiyear agreement. In determining compliance with the pay standard, provisions for cost-of-living adjustments will be cost out on the assumption of a 6 percent annual rate of inflation in the consumer price index over the life of the contract. The standard therefore leaves room for complete flexibility in allocating the pay increase between wage and fringe benefits, and between fixed increases and cost-of-living adjustments. Formal collective bargaining agreements signed before the announcement of the anti-inflation program and (for nonunion employee groups) annual pay plans in operation by October 1, 1978, are not subject to the pay standard.

In determining compliance with the pay standard, employers' contributions that are required to maintain the existing level of health and pension benefits are distinguished from contributions made to improve the level of benefits. Increases above 7 percent in the costs of maintaining existing health benefits are not counted in judging compliance. Special provisions also apply to pension plans that pay specified benefits at retirement. Changes in employers' costs resulting from changes in funding methods, amortization periods, actuarial assumptions, and plan experience are not included as pay-rate changes, but changes in employers' costs resulting from plan amendments, changes in the benefit structure, or the effect of wage and salary changes on benefit levels are included. Further details on the application of the pay standard to various pay plans can be found in the regulations issued by the Council on Wage and Price Stability on December 28, 1978.

In the interest of equity and improved productivity, some exemptions from the pay standard are allowed. First, workers who earned an hourly wage below \$4.00 on October 1, 1978, are exempt from the standard. Second, wage increases in excess of the standard are acceptable if they are offset by explicit changes in work rules and practices that demonstrably improve productivity to a matching or greater degree. Third, wage increases above the standard are justifiable to preserve a historically close tandem relationship with another employee group. Finally, where several explicit and tightly defined criteria show that pay rate increases above the pay standard are necessary to attract or retain employees in a particular job category because of an acute labor shortage, the amount of the excess may be exempted from the standard.

Rates of price increase tend to vary considerably more from industry to industry than rates of wage increase. This occurs because rates of productivity growth and the relative importance of nonlabor costs differ across industries. Realistic standards must recognize this inherent variation and its significance as an allocational device in a market-oriented economy. At the same time, it is important to avoid a variable price standard based upon

a simple pass-through of costs, since such rules can weaken the incentive to improve productivity.

The Administration's approach to the deceleration of inflation avoids these pitfalls. The price standard requires that individual firms limit their cumulative price increases over the next year to one-half of a percentage point below the firm's average annual rate of price increase during 1976-77. Some industries had abnormally high or low rates of price increase during this base period. These extremes are taken into account by limiting the price increase for an individual firm to no more than 9.5 percent, and by regarding any increases of 1.5 percent or less as complying with the standard. If increases in hourly labor costs within a firm decelerate by more than one-half of a percentage point relative to the 1976-77 rate of increase, the deceleration of prices must be commensurately greater to be in compliance with the standard. Certain categories of goods and services, specified in the price standard regulations issued by the Council on Wage and Price Stability, are excluded from the calculation of a company's average price change.

A company that is unable to comply with the price deceleration standard because its average price change cannot be calculated, or because of uncontrollable price increases in the goods and services it buys, is asked to satisfy a two-part profit limitation. The company's profit margin during the program year should not exceed the average profit margin for 2 of the company's last 3 fiscal years prior to October 2, 1978. Besides this, however, program-year profit should not exceed base-year profit by more than 6.5 percent plus any positive percentage growth in physical volume from the base year to the program year.

Finally, a percentage margin standard is available to companies in the wholesale and retail trade and in food manufacturing and processing industries as an alternative to the price standard. Details on this alternative are provided in the regulations issued by the Council on Wage and Price Stability.

Real Wage Insurance

One of the obstacles to the success of voluntary wage and price standards is fear on the part of each group of workers that their observance of the wage standard could lead to a loss of real income if others do not cooperate, or if uncontrollable events, such as a serious crop shortage, result in price increases. Faced with such uncertainty, and basing their price expectations on recent patterns of inflation, many workers might be reluctant to cooperate with the standards program. To improve the acceptability of the standards, the Administration is proposing to the Congress an innovative program of real wage insurance for those who observe them.

Under the real wage insurance proposal, employee groups that meet the 7 percent pay limitation would receive a tax credit if the consumer price index increased by more than 7 percent over the year. The rate of the tax

credit would be equal to the difference between the actual increase in the consumer price index and 7 percent, up to a limit of 3 percentage points (10 percent inflation). This rate will be applied to each employee's wages up to a maximum of \$20,000 per job. Employee groups that are exempt from the pay standard (low-wage workers and those under existing collective bargaining contracts) will qualify for real wage insurance if their average pay rate increase is 7 percent or less during the program year.

The most important factors determining the cost of the wage insurance program are the rate at which workers participate in it and the rate of inflation. Compliance with the standards by firms and employees will reduce labor costs, and price increases should move down correspondingly. But there are other, less predictable factors that influence the overall rate of inflation, such as changes in the prices of food and fuel, in exchange rates, and in productivity. The uncertainty surrounding the behavior of these factors means that the cost of the program itself is uncertain.

With reasonable assumptions concerning participation and the likely behavior of other economic factors influencing inflation, we can arrive at general estimates of the program's cost. Some 87 million workers are potentially eligible for the program, although not all are likely to qualify for the wage insurance. For example, low-wage workers and those covered by existing contracts are exempt from the pay standard. Given expected 1979 wage increases for these groups, most workers who are exempt from the pay standard are unlikely to qualify for real wage insurance. Estimates of the cost of the program thus depend in part on assumptions concerning the likely compliance of workers who are not exempt from the standard.

If three-fourths of those workers are in compliance, the real wage insurance program would result in a budget cost of approximately \$5 billion for each percentage point of inflation in excess of 7 percent. Lower compliance by nonexempt employee groups would raise the expected inflation rate but lower the number of workers eligible for the tax credit. In this sense the potential budgetary impact of the insurance program is self-limiting.

As noted above, the expected budgetary cost of the program will also depend importantly on productivity growth and the behavior of food and energy prices. Estimates of the budgetary impact, adjusted for the expected response of the consumer price index to the oil price decisions reached by the OPEC cartel in December 1978, appear in Table 18.

With three-fourths compliance by employee groups who are not exempt, the expected budgetary cost of real wage insurance would vary principally with productivity and food price developments, as shown in Table 18. With full compliance, the most likely payout would be zero, since price increases should be less than 7 percent under each combination of food price and productivity assumptions in the table. As a result, even without the incentive provided by real wage insurance, substantial compliance with the standards would yield a significant reduction of inflation and a gain in real wages.

TABLE 18.—*Estimated annual budgetary cost of real wage insurance proposal*

(Billions of dollars)

Assumed food price increase	Assumed productivity growth	
	0.6 percent	1.1 percent
8 percent.....	2.5	0
10 percent.....	4.5	2.0

¹ This is the estimate in the fiscal year 1980 budget and is based on the current forecast for food price increases and productivity growth.

Note.—Calculations assume three-fourths compliance by nonexempt employee groups.

Source: Council of Economic Advisers.

Real wage insurance is a novel use of incentives to foster wage and price restraint. The tax credits are not designed to compensate, on a straight dollar-and-cents calculation, those who might have received higher wage increases but chose to observe the standards. Even with real wage insurance in effect, observance of the standards by particular groups of employees requires a recognition of the national interest in individual wage and price decisions and an awareness of the long-run gains that everyone can enjoy if inflation is reduced. Real wage insurance offers to groups of employees not a cash “buy-out” of higher pay increases, but an important protection against the major risks associated with compliance.

Although the proposed program would rely on the tax system to provide refunds if inflation exceeds 7 percent in 1979, it is different in purpose, design, and effect from proposals to index the general revenue system in such a manner that the connection between inflation and tax revenues would be reduced or eliminated. The overriding purpose of the plan is to reduce inflation directly by inducing cooperation with the pay and price standards of the anti-inflation program. Tax indexation proposals, on the other hand, seek to insulate the tax payments of individuals and corporations from the effects of inflation, but they do not reduce inflation.

Sectoral Problems

The pay and price standards are designed to be guides for decision-making agents who have discretionary power in wage and price determination. Even with widespread compliance, however, it will be necessary to supplement the standards with special programs tailored to unique inflationary problems in some sectors.

Prices of health care, for example, have generally outpaced overall inflation, and expenditures for such care constitute a steadily escalating share of our national output. Yet the health care industry is not one in which market forces can be expected to provide an adequate restraint on price increases. The Administration has taken measures to strengthen health planning and to encourage growth in Health Maintenance Organization programs, which embody incentives to promote cost consciousness. The Administration is also seeking a substantial deceleration in the growth of hospital charges,

which are the largest and fastest growing component of medical care costs, through voluntary standards for hospital cost increases. For 1979 the ceiling on such increases is 9.7 percent, which implies a deceleration of over 2 percentage points from current rates of hospital cost increases. The President will propose to the Congress a legislative initiative on hospital cost containment that would establish a hospital cost standard in law.

Professional workers in the health industry are also subject to the general standards for professional fees, which apply to companies providing professional services on a fee-for-service basis. A company will be in compliance with the standard if the average rate of change in its fees does not exceed 6.5 percent and if the increase in the fee for any single service does not exceed 9.5 percent.

Food price changes have accounted for a major part of the recent inflation and in general follow a more erratic year-to-year course than other prices. At the farm level, price changes are usually the result of weather conditions and other supply-side shocks beyond the control of individual farming units. The monitoring of these prices will therefore focus on overall market trends. Where price increases in particular commodity markets exceed the overall inflation rate and are not justified by changes in costs, administrative actions to expand supply will be considered.

At the retail level, individual firms in the food processing and distribution sectors will be expected to adhere to the price standards with respect to increases in margins. The Department of Agriculture and the Council on Wage and Price Stability will cooperate in a joint effort to monitor cost, price, and marketing margins. Efforts will be made to ensure that lower commodity prices at the farm level are quickly reflected in retail prices. Moreover, decisions on 1979 support and import levels have been made with careful attention to their impact on inflation.

REGULATORY POLICY

Most of the regulatory activities of the Federal Government can be classified into two main groups. *Social regulation* seeks to control threats to the environment and to human health and safety that arise as an undesirable by-product in the production and use of goods and services. *Economic regulation* controls the prices, wages, conditions of entry, or other important economic characteristics of particular industries. While the Administration's efforts toward regulatory reform cover many areas, their essential aim is to minimize the costs and improve the effectiveness of social regulation and to reduce the scope and rigidity of economic regulation.

Economic Regulation

The 1978 *Economic Report* discussed in some detail the current problems with economic regulatory programs, indicating that in many industries the regulatory structure established in the past is no longer suited to present economic conditions.

The President recognized this difficulty in the case of the airline industry, and the Congress agreed by initiating the first deregulation of a major industry by legislative action in recent history. Under the Airline Deregulation Act of 1978, entry and price regulation of domestic airlines will be phased out by 1982 and 1983 respectively. During the transition, the act provides much greater freedom and flexibility in entry and fares than was previously the regulatory norm. The new law strengthens the already substantial impetus to competitive forces that the industry was given last year by the Civil Aeronautics Board. The board's liberalizing actions on fares and entry produced markedly lower fares along with sharp increases in air travel, load factors, and airline earnings. The provisions of the new legislation should lower prices even more and broaden the variety of services to consumers.

In the coming year the Administration will support legislation that will extend the principles and benefits of airline deregulation to the surface transportation industry. The inefficiencies produced by price and entry regulation of the trucking industry are well known: empty return trips, restrictions on peak-offpeak pricing, anomalous commodity class rates, and lack of price competition. For example, in New Jersey and California, where such restrictions do not apply, trucking rates for unregulated intrastate traffic undercut comparable interstate rates by 10 to 15 percent.

The current problems with rail regulation are different. Rates of return for the rail industry fall below the all-industry average, and the number of bankruptcies in the industry has historically been above normal. At the same time, the principal rationale for government regulation—protection from monopoly—has been eroded by competition from trucks and shifts in population. The financial difficulties thus created have been compounded by Interstate Commerce Commission regulation that tends to slow or prevent rail abandonments and to inhibit railroads from reducing rates to meet competition from trucks and water carriers. The adverse effects of competition from other means of transportation and the Interstate Commerce Commission's regulation of railroad earnings have been offset up to now by substantial Federal subsidies. Unless regulation of the rail industry is relaxed, the inefficiencies and necessary subsidies are likely to continue to grow.

Social Regulation

In recent years social regulation has greatly extended its scope and increased its complexity. Much of this heightened activity has been in response to growing public concern about an ever-widening range of environmental, health, and safety problems. It has also been spurred by our increasing ability to detect potentially harmful health effects from chemicals or chemical reactions. Controlling the harmful side effects of economic activity produces substantial benefits to society. But it also imposes costs, and these have mounted significantly as the scope and stringency of regulation have increased.

Our measurement of regulatory costs and benefits is highly imperfect. In addition, measures of the benefits from regulatory provisions—such as improvements in the environment and in health and safety—are generally excluded from the current national income and product accounts. The resources devoted to producing those benefits are not available for producing other outputs. As a society, we accept a tradeoff of lower *measured* output for increases in *unmeasured* output in the form of general environmental quality.

Once incurred, the costs of regulatory actions enter into the wage- and price-setting mechanisms of the economy. Most of the costs of regulatory action show up not as governmental budget expenditures, but as increased costs to industry. Acceptance of higher prices relative to wages and other money incomes is the way in which society pays for the benefits of social regulation. In fact, however, our economic institutions and measures of prices do not distinguish between these sources of price increases and others. Individuals and groups try to escape paying the costs of regulation by increasing wages and other forms of income to match the higher prices. The result is an additional round of price increases. But the costs of regulation cannot be avoided, and widespread attempts to do so simply add to inflation.

Both the large impact of government regulation, measured by its costs and benefits, and the way in which the costs add to inflation, highlight the responsibility of all branches of government to make sure that regulations are both necessary and efficiently designed. This Administration has undertaken a number of steps toward that goal.

Present Efforts

Effectively managing the regulatory functions of government entails two tasks. The first is to improve the design of individual regulations. They should be confined to situations where they are necessary; they should set standards that will meet statutory objectives without being needlessly stringent; and they should minimize the costs of meeting those standards. The second task is to view the regulatory process comprehensively to judge how all the regulations being issued will affect costs and prices, the use of national resources, and the economic situation of particular industries and sectors.

The effort to improve the cost effectiveness of individual regulations began in 1974 with the requirement that regulatory agencies of the executive branch analyze the costs and benefits of major new regulatory proposals, as part of the process of preparing regulations. In 1978 the President broadened this requirement and also took steps to ensure that these analyses were reviewed not only by the regulatory agencies, but by the other economic agencies of the executive branch as well. The Regulatory Analysis Review Group was created, with representatives from both regulatory and economic agencies, to review several of the most important regulatory proposals each year.

During its first year, the review group submitted for the public record analyses of five major regulatory proposals having substantial economic effects: the acrylonitrile standard and generic carcinogen policy of the Occupational Safety and Health Administration, the ozone standard proposed by the Environmental Protection Agency, the Department of Transportation's regulation to provide equal access for the handicapped, and the Department of the Interior's surface mining regulations. Analyses of the Environmental Protection Agency's new source performance standards for steam electric plants and the Department of Energy's proposed coal conversion regulations for electric utilities and general industry were in progress at year-end.

The task of ensuring that regulations do not impose undue costs extends beyond the analysis of newly proposed regulations. On March 23, 1978, the President issued an executive order requiring agencies to establish a "sun-set" procedure for regulations previously issued by the regulatory agencies of the executive branch. Under this executive order, each agency must periodically review its existing regulations with a view to eliminating those that are unnecessary and improving and simplifying others. Agencies must publish a semiannual agenda that sets forth the list of regulations to be reviewed, including at least one regulation whose economic impact is substantial.

Effective management of the regulatory process must go beyond measures dealing with individual regulations. Although the scope of social regulations has been expanding rapidly for over a decade, the Federal Government has had no process by which the combined social and economic effects of its regulatory actions could be assessed. Because of the complexity of the problems involved, development of analytical techniques and procedures to make such overall assessments and to utilize them constructively will have to occur gradually. But in 1978 the Administration took several steps in this direction.

In March 1978 the President ordered the executive branch agencies to publish semiannual agendas of forthcoming significant regulatory proposals and actions. In October he created a Regulatory Council charged with improving and using those agendas to create a government-wide calendar of scheduled regulations. The council is composed of all executive departments and agencies with regulatory responsibility as well as a large number of independent regulatory agencies. The calendar itself will present, for the first time, not only a timetable of new regulatory proposals and issuances, but preliminary data on their objectives and potential costs. As procedures, data bases, and analyses are improved, the calendar can provide both the regulatory agencies and the Executive Office of the President with a body of information for use in examining and assessing the effects of regulations and improving overall regulatory management. Using the information and analyses developed in producing the calendar, the Regulatory Council itself can address problems of coordination and thus eliminate conflicts and dupli-

cation. In addition, it will begin to examine the problems that have arisen in particular industries or sectors from the combined effects of regulations imposed by different agencies.

The measures to improve the regulatory process outlined above are already making major contributions, not only increasing the cost effectiveness of individual regulations but improving the overall coordination and integration of regulatory programs. Additional progress will depend, however, on developing satisfactory approaches to a number of other complex and difficult problems.

Balancing Costs Against Benefits

The statutes authorizing the various social regulatory programs vary widely in the degree that they allow the regulatory agencies to balance benefits against costs in setting regulatory standards. Some statutes dealing with the control of damaging health effects from chemicals or other substances appear to be based on the proposition that effects are harmful above some threshold of concentration but not below it. These statutes, in effect, require the regulatory agency to set standards at or just below the presumed threshold without regard to costs. In fact, scientists are increasingly questioning the existence of the presumed thresholds; many believe that health hazards diminish continuously down to zero concentration. Since in many cases flatly prohibiting the substance is far too costly or disruptive, any standards that set the level of concentration above zero must implicitly take into account a balancing of economic and social costs against the prevention of health risks.

Some regulations are issued under statutes which do not mention balancing economic costs against benefits, but do require that the regulatory standard be "feasible." Still other statutes not only permit but require economic costs to be taken into account. And finally there are cases where regulatory costs are ignored. For example, the "Delaney Amendment" to the Food, Drug, and Cosmetic Act, flatly bans substances used as food additives if they have been found carcinogenic in animal tests, regardless of their potency as carcinogens or the economic costs that such a ban would impose.

There is obviously no all-purpose formula for reaching sound decisions about the stringency of environmental health and safety standards, given the need to take into account both the prevention of health risks and the costs of such prevention. Uncertainty is always present in determining the specific nature and degree of the health risks from exposure to various substances, though the uncertainties in some cases are substantially greater than in others. The same is true of costs. In each regulation, a decision must be made about how to deal with these uncertainties. Regulators sometimes encounter situations where exposure to health risks is very high but occurs among a small number of people; at other times one finds very low exposure among a large number of people. Although circumstances thus vary considerably from case to case, a generally consistent approach to these and similar problems by the different regulatory agencies would do much to make the needed

regulations better and more cost effective. Developing such an approach will require coordination among regulatory agencies as well as a careful analysis and review of the statutory background behind the different regulatory programs.

Overall Management of the Regulatory Process

Despite many differences, social regulation shares some of the characteristics of the budgetary programs of the Federal Government. Both are designed to provide economic and social benefits: such things as educational services, highways and dams in the case of the budget; and environmental improvements and health protection in the case of social regulation. Both use national resources that could be diverted to other uses. For the budget the resource costs show up as Federal expenditures, which are paid for by taxes. The costs of regulations are less visible, since they are imposed on industry and paid for by consumers in the form of higher prices.

The Nation has long had a set of procedures to consider the Federal budget as a whole: Costs of particular programs and of the total budget are estimated in order to make the best possible qualitative judgments about benefits, and priorities among programs are established. Regulatory programs have no such established procedures, and as a consequence there is no good estimate of the overall cost of regulation. The difficulties of developing such a process are formidable. Since program costs in the budget represent money actually spent by the government, there is a firm basis for finding out how much programs have actually cost, however difficult it is to estimate future costs.

Most regulatory costs, however, are not directly borne by the Federal Government but by private parties. Moreover, some of these costs, while very real, can only be roughly estimated even after they have actually occurred. What, for example, are the costs of requiring a firm to locate at point M instead of point N, or of requiring that chemical Z no longer be used as a pesticide? Such estimates are necessarily subject to dispute. And, not unnaturally, people who place a high value on the benefits of the particular regulation tend to arrive at low estimates, while those who must pay the costs tend to make high estimates.

In addition, social regulation is carried out under a large number of statutes, many of which state quite specifically the objectives to be reached, the deadlines for reaching them, and the factors that must be considered in setting regulatory standards. The executive branch has much less flexibility in asserting priorities and deferring or speeding up the issuance of regulations on the basis of economic conditions and social needs than in managing many budgetary programs.

More generally, the relationship between the Congress and the executive branch in the case of budget programs is quite different from that in the regulatory process. Although the President has flexibility in determining the priorities among budget programs and the size of the recommended expendi-

tures each year, the Congress must pass on the appropriations to carry out those programs. Once a regulatory statute is passed, the executive branch agencies do not have to come back to the Congress each year, and they may issue regulations that confer important benefits and impose large costs without congressional approval. On the other hand, the statutes under which most regulation occurs tend to be extremely specific, often limiting the ability of the President and the heads of executive agencies to determine priorities and otherwise balance costs against benefits among and within the various regulatory agencies.

For all of these reasons the development of procedures and techniques to improve the overall management of the Federal regulatory process, to achieve social gains at minimum cost, and to reduce the inflationary consequences of regulatory activities will have to be a long and carefully executed process. It should proceed step by step and involve both the Congress and the executive branch. Several important gains have already been made. According to polls, the public continues to believe that improvements in the environment, in health, and in safety are an important national goal. But recently this sentiment has been accompanied by a growing recognition of the very large costs and the inflationary effects of regulation. The effort to improve both the cost effectiveness of individual regulations and the overall management of the regulatory process will continue to be a top priority of this Administration.