THE ANNUAL REPORT
OF THE
COUNCIL OF ECONOMIC ADVISERS

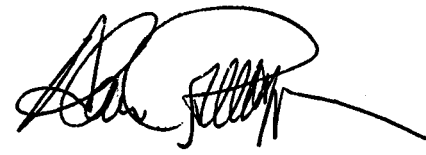
LETTER OF TRANSMITTAL

COUNCIL OF ECONOMIC ADVISERS,
Washington, D.C., January 31, 1975.

THE PRESIDENT:

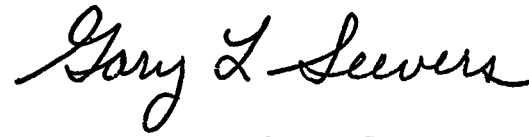
SIR: The Council of Economic Advisers herewith submits its Annual Report, January 1975, in accordance with Section 4(c)(2) of the Employment Act of 1946.

Respectfully,



ALAN GREENSPAN,
Chairman.

WILLIAM J. FELLNER.



GARY L. SEEVERS.

CONTENTS

563-280 O - 75 - 2

List of Tables and Charts

CHAPTER 1

Economic Policy and Outlook

THE STORY OF THE PAST YEAR was one of inflation and recession. Several of the forces that added to the rate of inflation also exerted downward pressure on economic activity. The sharp rise in oil prices resulted in a large transfer of purchasing power to the oil-producing countries. Inflation, strong demands for credit, and the unwillingness of the monetary authorities to underwrite a continued acceleration of inflation drove interest rates upward, causing a slump in housing. Another debilitating effect of the higher and variable rate of inflation was the sharp rise in uncertainty regarding future rates of price increase. The general rise in prices was instrumental in reducing real incomes in another way. Inflation pushed individuals into higher tax brackets thereby causing a significant transfer of real income from individuals to the government sector. Inflation also caused a similar updrift in the tax liabilities of business. The result was to shift the budget in the direction of restraint, by considerably more than had been anticipated at this time last year.

As 1975 begins, the unemployment rate stands at its highest level since 1958 and production and employment are declining sharply. The decline in activity during the closing months of the year gathered so much momentum that developments beyond the current quarter are difficult to gauge. It is quite likely, however, that the contraction of business activity and rising unemployment will continue for several more months. Although the rate of inflation is still high, it has begun to moderate. One can observe actual declines in prices of crude industrial materials and a slowdown in the rate of price advance among important categories of goods sold in wholesale and retail markets.

The most pressing concern of policy is to halt the decline in production and employment so that growth of output can resume and unemployment can be reduced. The momentum of the decline is so great that a quick turnaround and a strong recovery in economic activity are not yet assured. But prompt action on the Administration's proposals to stimulate the economy should hasten the end of the recession and contribute to the pace of recovery during the second half of the year. The policies that we use to support the economy in 1975 must be consistent with a further reduction in inflation in 1976 and thereafter. This will obviously require discipline both in the Federal budget and in the monetary policies of the Federal Reserve.

The formulation of economic policy is complicated by the need for much stronger actions to tackle the Nation's energy problems. New energy policies have been proposed which will provide an enduring framework for the adjustment that began after the oil embargo. The adjustment to lower levels of consumption and importation will impose further costs upon the economy in the short run in order to avoid mounting political and economic costs in the long run. The energy program will raise prices at a time when inflation is serious. On balance, however, the program will provide important benefits. Moreover, as formulated it is consistent with the values and the objectives of an efficient market-oriented economy.

THE PROGRAMS TO STIMULATE THE ECONOMY AND CONSERVE ENERGY

To provide support for the economy, the President on January 13 proposed tax relief for individuals and business. For individuals the program calls for a tax rebate equivalent to 12 percent of total 1974 personal tax liabilities up to a limit of $1,000 per return. The rebate would total approximately $12 billion and would be paid in two instalments, the first in May and the second in September.

For business the President proposed a 1-year increase in the investment tax credit to 12 percent. Except for utilities, which now have a 4 percent credit, the present credit is equal to 7 percent of investment in equipment. For electric utility investment in generating capacity that does not use oil or gas, the higher tax credit would remain in force through 1977. The increase in the tax credit is expected to reduce tax liabilities of businesses by approximately $4 billion during 1975. The credit will apply to machinery and equipment put into service during 1975, as well as to orders placed during 1975 and put into service by the end of 1976.

The tax cut will not prevent a decline in real output from 1974 to 1975 but it will reduce the extent of the year-over-year decline—perhaps by one-half of 1 percent to 1 percent in terms of real GNP—and will contribute to the recovery in the second half of 1975. An assessment of the economic effects of the stimulus program is complicated by a number of factors. We cannot be certain how much of the tax cut will be saved rather than spent, but past experience suggests that most of the tax cut will be spent, and a large fraction of it this year. Saving will be high initially, but as the year progresses spending will increase.

The investment tax credit may have some immediate effect in stimulating purchases of certain types of equipment, but it is most likely to begin to affect spending appreciably in the second half of 1975. Because of the time limitations applicable to the tax credit, businessmen have an incentive to undertake some investment now that they would otherwise have undertaken only later. In view of the fact that new orders for durable goods generally and for machinery and equipment specifically have fallen rapidly in recent months,

any addition to orders at the present time is quite important in itself, even if it does not raise fixed investment immediately.

The Administration's energy program aims at discouraging energy consumption and encouraging domestic production by raising the relative price of energy. Prices are increased through removal of controls in combination with a series of taxes, but the tax proceeds are refunded so as to keep consumer purchasing power roughly unchanged once the program has become fully effective. The major components of the Administration's energy program are:

—Price decontrol for crude oil and deregulation for new natural gas.
—A windfall profits tax on crude oil.
—An import fee which will rise to $2 per barrel on imported oil, accompanied by an excise tax of $2 per barrel on domestic oil and an equivalent tax of 37 cents per thousand cubic feet on natural gas.
—Creation of a strategic oil reserve of up to 1.3-billion barrels with early action to require the stepped-up holding of private oil inventories.
—Protection of domestic energy producers against excessive risks from abrupt declines in prices of imported petroleum.
—Expanded production from the Naval Petroleum Reserves and other Federal oil deposits.
—Expanded production and use of coal and nuclear energy.
—Development of a synthetic fuels industry.
—Various measures designed to increase the efficiency of energy consumption.

An important source of uncertainty regarding the stimulus program concerns the timing of the energy package. The reasoning behind the decision to embark on an energy conservation program is outlined further on. Here we note some of the price and fiscal aspects of the energy program.

It is estimated that the imposition of import fees, excise taxes on crude oil and natural gas, and the decontrol of domestic crude oil by April 1, 1975, will directly add about $30 billion (annual rate) to the Nation's oil and gas bill. Ultimately prices should rise by an equivalent amount. The windfall profits tax (WPT) is designed to capture the increase in profits of domestic oil producers attributable to decontrol. The increase in receipts from import fees, excise taxes, and the windfall profits tax will be returned to individuals, businesses, and governments mainly through a set of tax reductions, with a portion taking the form of increased Federal Government expenditures.

The energy program will be introduced gradually. On February 1 an import fee of $1 per barrel was imposed through Presidential action. This fee will rise to $2 on March 1 and to $3 on April 1. However, for purposes of economic projections the Administration has assumed that Congress will levy a $2 tax on domestic crude oil and pass the balance of the energy program with an effective date of April 1 of this year. This would make the final increase in the import fee unnecessary.

The initial effect of the import fee will be to raise prices of imported oil and of domestic oil that is now uncontrolled. Together these constitute some 60 percent of total U.S. oil consumption. This effect will be reinforced on April 1 by the decontrol of the remaining part of domestic petroleum production. In the second quarter of the year, the average price of crude oil is expected to rise by approximately $4.20 per barrel over current levels as a result of decontrol and the $2 per barrel excise tax. It is expected that the increase will be reflected with a lag in higher prices for gasoline, fuel oil, and other petroleum products and eventually in higher electricity prices. By the end of the second quarter of 1975, when all of the program will be effective, the consumer price index is estimated to be 1.3 percent higher than it would be without the proposed program. Not all of the higher price of crude oil and natural gas will affect prices in final markets this quickly. At first some of the higher petroleum prices will reduce profits rather than increase the prices charged by users of refined petroleum inputs, especially where prices are regulated. The profits squeeze is not expected to last long, however, and by the latter part of 1976 all of the increased cost should show up in the form of higher prices of those goods and services that consume crude oil and natural gas directly and indirectly. The $30-billion impact is estimated to be about 2 percent of GNP. About 90 percent of it will be reflected in higher prices by the fourth quarter of this year. For all of 1975 we estimate that the GNP deflator will be about 1 percent higher than it would have been without the program.

Rising prices not compensated for by offsetting tax cuts will reduce real incomes to a slight extent in the first half of 1975. Consequently, the effect of the stimulus proposals will be partially offset by the energy proposals during the first half of the year. On the other hand, to the extent that oil imports and hence the transfer of purchasing power to foreign oil producers are reduced the demand for domestic goods would be increased. By the third quarter the stimulus from both programs will be substantially greater.

THE ENERGY TAX OFFSETS

The energy taxes are to be turned back to the economy in a variety of ways. (Estimates below are annual rates based on calendar year 1975.)

—For individual taxpayers, rates are being reduced and the low-income allowance is being raised in such a way that total taxes will be cut by an estimated 12 percent from what they would otherwise be in 1975. The increase in the low-income allowance to $2,600 for joint returns from its present level of $1,300 means that a family of four will pay no taxes if its income is $5,600 or less. This part of the program, which would involve a reduction in withholding schedules starting June 1, would return an estimated $16 billion.

—Low-income households that pay no taxes and certain low-income taxpayers will receive a special distribution of up to $80 per adult after application to the Internal Revenue Service. This would return $2 billion. Disbursements are expected to start in the summer of this year.

—The program calls for a tax credit of 15 percent of expenditures—up to a maximum expenditure of $1,000 per homeowner—for outlays that improve residential thermal efficiency. Credits could be claimed during the next 3 years. This aspect of the program would return $0.5 billion per year.

—The Federal Government would use $3 billion to cover its share of the costlier energy bill, while State and local governments would receive an additional $2 billion in revenue sharing grants.

—Business would receive $6 billion through a reduction in the corporate tax rate from 48 percent to 42 percent.

SUMMARY

Table 1 brings together the various parts of the Administration's stimulus and energy programs. Receipts and expenditures, defined on the national income accounts (NIA) basis, are shown as seasonally adjusted quarterly totals, not at annual rates.

The stimulus or temporary part of the combined program appears as reductions in personal and corporate tax receipts. In addition to refunds to individuals of part of their 1974 tax liabilities, personal tax receipts include an allowance for the investment tax credit applicable to unincorporated business. This credit is considered a reduction in liabilities for the entire year and consequently is spread over all quarters of 1975.

The import fees, excise taxes, and windfall profits taxes, which are viewed as permanent, are all treated as indirect business taxes. The permanent offsets to these taxes appear as reductions in personal and corporate income taxes and as increases in Government expenditures.

Proceeds from the energy taxes are returned to those individuals who pay income taxes primarily by reductions in withholding schedules. Withholding schedules will be adjusted in the second quarter of 1975 in such a way that an entire year's reduction in tax liabilities will be made over a 7-month period. Consequently, withholding will be increased after the fourth quarter of 1975 but not up to the rates of early 1975.

Low-income households, who pay less than $80 per adult in income taxes, will receive transfer payments starting in the third quarter. Government purchases are increased in the budget to cover the Federal share of the higher oil bill, while State and local governments are the beneficiaries of increased grants from the Federal Government.

These figures are an accounting of receipts and expenditures and do not necessarily reflect their impact on the behavior of individuals and businesses. Nonetheless they demonstrate that energy taxes partially offset tax cuts

in the spring and that the impact of the program is greatest in the second half of 1975, especially in the third quarter.

THE FISCAL 1976 BUDGET

Because of concern that a too expansionary budget carries the risk of worsening the inflation, the Administration has proposed a slower rate of increase in spending from fiscal 1975 to fiscal 1976 than from fiscal 1974 to fiscal 1975. The new budget calls for outlays of $349.4 billion, a rise of 11.5 percent compared to a rise of 16.8 percent from fiscal 1974 to fiscal 1975. The President has proposed a moratorium on new spending programs except for energy as well as numerous actions to reduce spending in existing programs. The reductions total $17.5 billion and embrace $7.8 billion in proposals made last year and $9.7 billion in new reductions. Taking into account the $16 billion in tax cuts to stimulate the economy, receipts are expected to total $297.5 billion, a rise of 6.7 percent over fiscal 1975.

The deficit is expected to rise from an estimated $34.7 billion to $51.9 billion. These are large deficits but they reflect the shortfall in receipts and increased unemployment benefits stemming from the weak economy.

TABLE 1.—*Federal budget receipts and expenditures associated with stimulus and energy programs, national income accounts basis, 1975–76*

[Billions of dollars; seasonally adjusted quarterly totals]

Receipt or expenditure	1975				1976	
	I	II	III	IV	I	II
By type:						
Total receipts	−0.1	−1.6	−9.7	−3.0	0.4	0.0
Personal taxes	0	−7.7	−15.4	−8.4	−4.8	−4.9
Stimulus	0	−5.1	−7.3	0	−.3	−.3
Energy	0	−2.6	−8.1	−8.4	−4.5	−4.6
Indirect business taxes	2.2	8.3	8.1	7.9	7.7	7.6
Corporate taxes	−2.2	−2.2	−2.4	−2.5	−2.6	−2.7
Stimulus	−.8	−.8	−.8	−.8	−.8	−.8
Energy	−1.4	−1.4	−1.5	−1.7	−1.8	−2.0
Total expenditures	0	.5	1.8	1.8	1.8	1.8
Purchases of goods and services	0	0	.8	.8	.8	.8
Grants-in-aid to State and local governments	0	.5	.5	.5	.5	.5
Transfer payments	0	0	.5	.5	.5	.5
Total expenditures minus total receipts	.1	2.1	11.4	4.8	1.4	1.7
By program:						
Stimulus taxes	−.8	−5.9	−8.1	−.8	−1.1	−1.1
Net energy taxes	.8	4.3	−1.5	−2.2	1.4	1.0
Import fees, excises, and windfall profits taxes	2.2	8.3	8.1	7.9	7.7	7.6
Tax offsets	−1.4	−4.0	−9.6	−10.1	−6.3	−6.6
Energy expenditures	0	.5	1.8	1.8	1.8	1.8
Total expenditures minus total receipts	.1	2.1	11.4	4.8	1.4	1.7

Note.—Detail may not add to totals because of rounding.

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

For the calendar year the full-employment surplus on a national income accounts basis is expected to decline by $9 billion from 1974 to 1975.

FINANCING THE DEFICIT

The financing of the large deficits will pose problems which are not easy to evaluate. The economic circumstances of 1975 are quite different from those encountered in past recessions, like the recession of 1958. If prices are stable, any large decline in output lowers the demand for private credit, and this slack is taken up only in part by the normal increase in the budget deficit resulting from lower tax collections and higher unemployment benefits. Even a discretionary stimulus that would partly counteract rather than merely cushion a large decline of aggregate demand would probably not create serious financing problems under such conditions. The reason is that if unemployment is widespread and factors of production are in highly elastic supply, cost pressures are minimal and private investment and credit demands are likely to be low.

The present situation is far different from past recessions, but the deficit as presently estimated can probably be financed without serious problems in 1975. The private demand for credit will decline at least somewhat, and probably substantially, as the direct result of the low level of housing, reduced consumer purchases of durable goods, and the sharp swing from inventory accumulation to inventory liquidation. The drop in real output, however, has brought less relief in the credit markets than it would have under less inflationary conditions. Furthermore, imbalances have developed in the financial structure of businesses in recent years because of the disproportionate reliance on debt financing in general and short-term debt in particular. As the desired private refinancing is made more difficult by the deficit financing, businesses may abandon investment projects more readily than in the past, rather than risk further unbalancing their capital structure and increasing their credit market exposure.

One way of preventing significant displacement of private investment in a substantially underemployed economy would be to increase the rate of money supply growth to reduce Federal financing pressures. Under such conditions, an increase in monetary growth need not be inflationary in the short run, especially if there is a large unsatisfied demand for liquidity. On the other hand, should large deficits continue well after the recovery has taken hold, maintaining such a course of monetary accommodation could spark an increase in the rate of inflation. For this reason it is essential that any monetary accommodation to large fiscal deficits be permitted only so long as the effective underemployment of resources remains large and there is ample room for above-average growth. Otherwise, future price level trends will be affected adversely and the deficit will become increasingly "unproductive" in real terms.

Monetary policy faces great difficulties in the year ahead and will require careful and continuous evaluation by the Federal Reserve. The uncertainties that underlie the outlook for 1975 add to the importance of a flexible monetary policy. Monetary policy must be conducted so as to encourage a near-term recovery in the economy and a resumption of sustainable economic growth. Toward this end, reasonable growth in money and credit will be required—growth which, one hopes, will encourage a freer flow of credit and lower interest rates in private credit markets. Whether more accommodating credit conditions will in fact develop depends importantly on the ease with which the enlarged Federal deficit is financed, and also on the progress that is achieved in moderating the Nation's rate of inflation as 1975 progresses.

A special problem for monetary policy is posed by the energy conservation program, the initial effects of which will be to raise the price level. To a degree, this one-time increase in prices will require additional financing, so as to avoid a contractive effect on the real economy. However, rapid monetary growth would run the risk that inflationary pressures would once again be increased, later on if not in 1975, undermining the Nation's fundamental need to regain the basis for reasonable price stability. That must not be permitted to happen.

AID TO THE UNEMPLOYED

In response to the sharp rise in unemployment in the latter part of 1974, and in anticipation of further increases in 1975, the Administration initiated legislation to increase the duration and coverage of unemployment insurance benefits and to create employment by funding additional public service jobs. In December 1974, the President signed the Emergency Unemployment Compensation Act, which extends the duration of benefits by 13 weeks beyond the prevailing limits. Unemployed workers can now receive up to 52 weeks of benefits. The Emergency Jobs and Unemployment Assistance Act, also signed in December, grants unemployment benefits, for up to 26 weeks, for the first time to workers in occupations and industries that were not covered by the regular State or Federal programs. This act provides coverage for an estimated 12 million workers, primarily agricultural, domestic, and State and local government employees. While these programs are administered by the States, the funds are entirely from Federal sources.

The Emergency Jobs and Unemployment Assistance Act also amends the Comprehensive Employment and Manpower Training Act (1973) to expand Federal funding for State and local public service jobs. The budget provides funds that will permit an increase in the number of public service jobs from 85,000 in fiscal 1974 to 280,000 in 1975 and 1976.

THE OUTLOOK WITH NEW POLICIES

Given the above assumptions regarding energy, fiscal, and monetary policies, the economy is likely to continue its downward course in the first half of 1975 and to move onto the road of recovery in the second half. The

first-half decline is likely to be severe, however, and the subsequent recovery will still leave the level of output in the fourth quarter about the same as a year earlier. For 1975 as a whole real GNP will probably be about 3 percent below the average of 1974. The rate of inflation will be very high in the first half of the year—higher than it would be in the absence of the energy policy—but it should subside in the second half. For all of 1975, prices as measured by the GNP deflator should be 11 percent higher than prices in 1974. By the final quarter an inflation rate of about 7 percent is projected, not counting the pay increase scheduled for Federal civilian and military personnel. The projections of real GNP and the deflator yield a nominal GNP of about $1,500 billion, which is some 7¼ percent greater than the 1974 figure. Given the large decline in real output, the unemployment rate should average about 8 percent for the year, moving above that level before midyear but coming down from the peak in the second half.

The uncertainties are so great at the present time that the projections cited above, although presented as specific numbers, are subject to an unusually wide margin of error. The past several months have witnessed a progressive scaling down of output projections and a scaling up of unemployment projections.

NONRESIDENTIAL FIXED INVESTMENT

Early in January the Department of Commerce published a survey of plant and equipment plans that projected a rise of 4½ percent in nominal outlays from 1974 to 1975. In view of the prospective rise in capital goods prices the survey results imply a sizable decline in real outlays. Large nominal increases ranging from 14 to 28 percent were scheduled by producers of basic materials, such as steel, paper, chemicals and petroleum, and by mining firms, railroads, and gas utilities. Very small rises or decreases were projected by electric utilities, air transport, and commercial firms. The deterioration of sales, output, and profits since this survey was taken will probably lead to a scaling down of even this small overall planned increase, although the large expansion plans of a number of basic industries will provide an element of stability. The plans reported in this survey came in too early to be affected by the proposed investment tax credit.

There seems little likelihood of preventing a decline in real nonresidential investment in the first half of 1975. The pronounced slump in real outlays for producers' durable equipment in the final quarter of 1974 was heavily concentrated in outlays for automobiles and trucks. But the closing months of the year also witnessed decreases in the production of a broad range of machinery and equipment as businessmen canceled orders or delayed deliveries on contracts made earlier. These cutbacks will take the form of reduced deliveries in the first half. The liberalization of the investment tax credit, coupled with the turnaround in economic activity and a rebound in profits, should bring rising real outlays in the second half. The main impact of a liberalized investment tax credit will be felt late in the year. For

1975 the projection foresees nominal investment about 4 percent above the 1974 total but real investment down approximately 9 percent.

INVENTORIES

The behavior of inventory investment is likely to be the dominant influence on the course of production over the coming year. At the start of 1975 the ratio of nonfarm inventories to GNP in real terms was the highest since the end of World War II. It seems fairly likely that the physical volume of inventories will fall during most and perhaps all of the coming year, with especially large reductions in the first half. Even with a decline in stocks and above average growth in demand in the second half of the year, the ratio of stocks to output at year-end would still be high by post-World War II standards. Although stocks may well decline throughout the year, the impact of inventory behavior on the change in output should be greatest early this year, when inventory investment turns negative following a high rate of involuntary accumulation in the fourth quarter of 1974. What is already happening to automobile stocks will be reinforced by similar but less pronounced adjustments in other industries. By midyear, shifts in inventory investment should be contributing to rising overall production. All told, current dollar inventory liquidation could approach $5 billion in 1975.

HOUSING

Underlying conditions seem ripe for a reversal of the housing decline, even though the prospect of a sharp upturn appears small at this time. The stock of housing increased very little during the past year because of the low rate of starts. Despite very weak demand the low rate of housing completions kept vacancy rates from rising; the vacancy rate in rental housing, for example, stabilized from the first to the fourth quarter of 1974. The rate of housing starts in the fourth quarter of 1974 was about one-half the estimated underlying demand indicated by prospective household formation and replacement demand.

The projection for 1975 calls for private starts to begin rising this spring up to an annual rate of 1.6 to 1.7 million units in the final quarter, with single-family homes likely to be in the forefront of the recovery. Because of financing problems and reduced profitability, apartment house construction is not likely to recover until the second half of 1975, although it may show a very weak recovery in the first half. Real outlays for residential construction in 1975 are projected to be about 15 percent below those of 1974, and current dollar outlays, about 5 percent.

GOVERNMENT PURCHASES

Federal outlays for goods and services are expected to rise by about 8½ percent from 1974 to 1975, while State and local purchases are expected to rise by about 12 percent. Each includes an allowance for the higher cost of energy under the new energy program. In real terms, combined government purchases are expected to show little change from 1974 to 1975, with offsetting decreases and increases in the Federal, and State and local totals.

CONSUMPTION

Consumers hold the key to the strength of the economic recovery. If they respond as expected to the stimulus of the tax cuts proposed by the Administration for the spring and summer, real GNP should record a good-sized advance in the second half, but if not, the 1975 recovery could be a sluggish one. The effect of the tax cut on consumer incomes should be reinforced by a turnaround in gross private domestic investment, which has undergone a steep decline since the final quarter of 1973. In the meantime the loss of earned income is being cushioned by increases in unemployment benefits. Last year such benefits totaled more than $7 billion, but with this year's high unemployment they are projected to total more than $18 billion. The latter figure includes, in addition to regular State programs, about $2½ billion of extended State benefits and $3¼ billion in special unemployment benefits for those not previously eligible for unemployment compensation.

Consumer income will be bolstered on July 1, 1975, by a scheduled increase of $3.0 billion (annual rate) in social security benefits (excluding medicare benefits). One offset is the increase in social security taxes due to the rise in the taxable earnings base from $13,200 to $14,100 effective January 1, 1975. This tax increases Federal receipts by about $1½ billion, about half of which represents a reduction in personal income.

Consumers should be aided by a slower rate of inflation in the second half of 1975 compared with the first. The rate of inflation will be highest at midyear because it will reflect the main impact of the higher energy prices. The rate of increase should taper off considerably, even though the energy program will be adding to the level of prices throughout the year. The rise in disposable income and the slower rise in prices yield a substantial increase in real income in the second half.

Despite the possible negative aspects of the energy program this spring, we foresee some improvement in consumer spending in the second quarter occasioned by the refunds of 1974 tax liabilities. To some extent the refunds will induce additional purchases of automobiles, furniture, and appliances, even though initially the greater part of the refunds is likely to be saved. In the third quarter, however, the further stimulus scheduled for September, coupled with the rebates of the windfall profits tax and the stronger recovery, should bring a step-up in consumption that carries into the fourth quarter. For all of 1975 the personal saving rate is likely to be higher than in 1974.

Real consumer spending in 1975 may fall slightly below the corresponding total for 1974. If so, this would mark the second year of decline in real consumer spending. In nominal terms the increase over 1974 should be close to 10 percent.

ECONOMIC ASPECTS OF THE ENERGY PROGRAM

The economy surmounted the energy crisis with which 1974 began, but the energy problems of 1975 and beyond may prove more intransigent.

563-280 O - 75 - 3

Now, a year after the embargo, there is widespread agreement that the oil-exporting nations will maintain restrictions on oil supplies and thus be able to hold prices far above the pre-embargo level for at least the period immediately ahead. It is also agreed that the demand for goods and services by the oil exporters will rise, but not enough to offset the large money flows received in exchange for oil exports. Finally, it is realized that supplies of oil from foreign sources are unreliable and will remain so into the indefinite future. For these reasons, the Administration's energy policy is designed to lower imports and thereby reduce our vulnerability to interruptions in the supply of petroleum. In achieving this goal, the Administration is placing maximum reliance on creating market conditions that will have a lasting influence, rather than relying on allocations and rationing which at best are only short-term solutions.

An acceptable level of security can be achieved in the longer run with a combination of measures, including standby domestic capacity and strategic oil reserves for an emergency, as well as reduced consumption and increased production from conventional and new energy sources. Except for reduced consumption, none of these measures will increase security quickly. Consequently, it is essential that we begin to reduce import vulnerability by reducing demand, and that we promptly initiate programs to establish standby capacity and to increase energy production and stocks.

SHORT-RUN POLICIES

To curtail petroleum imports in the short run, the energy program would reduce total energy consumption by raising its price to the equivalent of the world market price plus $2 per barrel. This policy is better than restricting petroleum imports directly. If petroleum imports are rigidly controlled, unexpected variations in energy supply or demand would cause large disruptive effects because oil imports could not serve their usual role of offsetting these fluctuations. Restraining general energy consumption by raising its price is more equitable and more efficient than restraining specific energy uses. The diverse uses to which energy is put and the complex patterns of its consumption create extraordinary difficulties, administrative costs, and inefficiencies when administrative allocation is attempted. The burden falls more broadly and is handled more efficiently by the economy when it is imposed through the operation of market forces. Purchasers of energy can decide for themselves where they can best reduce consumption.

The elimination of price controls on crude oil (effective April 1) will increase the price of energy and reduce its consumption. The Administration has renewed its recommendation that the price of new natural gas be freed from controls, and that prices of regulated gas be decontrolled when existing contracts expire under their own terms. This will lead to a gradual but eventually large increase in natural gas prices. These actions will have some effect on the price of substitute fuels, such as coal, but price increases will come with some delay and will gradually induce additional supplies of energy.

The windfall profits tax in the President's energy program is designed tc prevent increases in profits on existing oil production that would have little, if any, short-term impact on production. The tax is levied on the difference between a base price and the price actually received. The marginal tax rate rises with the size of the gap, reaching 90 percent on that portion of the price received which is more than $3 per barrel greater than the base price. The tax will be phased out over a period of several years, as the base is gradually adjusted upward.

In the near term, oil producers will not receive additional revenues on existing production from the combination of decontrol and the WPT. But they will have a powerful incentive to make new investments, because they will receive higher prices when new ventures come into production.

Decontrol of old oil will be insufficient in the short run to bring about the reduction in imports that energy security requires. The $2 per barrel tax on crude oil and the 37 cents per thousand cubic feet tax on natural gas will raise the price paid by consumers above that received by producers in order to reduce consumption and imports further. The revenue from this tax, like other proposed energy tax revenues, would be returned to consumers of energy so that they would have roughly as much purchasing power as they had before the tax.

LONGER-RUN MEASURES

The costs of energy security are lower in the long run than in a short period because security can be achieved by measures that do not rely so heavily on demand restraint. The keystone to long-run policy is a storage program of up to 1.3 billion barrels, a strategic reserve which is large enough to replace imports for an extended period. This will permit the Nation to continue to import some oil from unreliable sources indefinitely without the potential costs of interruption.

Domestic production, encouraged by eliminating both price controls and relaxing restrictions on exploration in promising areas, would respond still more if investors were assured that the price they would receive for oil would not be temporarily driven below the long-run supply price by events in the world market. For this reason protection against large downside price risks for conventional oil production are proposed. Producers would thus be assured that large drops in the world price of oil would not disrupt the domestic market. Businesses that invested in energy-saving equipment would also be protected against competitors who avoided such expenditures.

A reduction in standards of living and potential output compared to what we would otherwise enjoy is inevitable with a program to achieve a greater degree of energy security, though the program announced by the Administration is designed to hold such effects to a minimum. The alternative approach—allocations and rationing—would give rise to structural changes in the economy that could have serious, long-run consequences.

A productive economy is one which readily responds to change and is open to growth, development, and new initiatives. Those characteristics

are weakened when market allocation of resources is supplanted by administrative control. The restrictions on individual choice that are caused by further centralization of decision making are obvious. Not so obvious, but potentially far larger, are the economic losses if the economy becomes bound to rigid patterns by these measures. An allocation system tends to favor large and established entities. It is likely to discriminate against small firms and the potential entrants from whom innovation could otherwise be expected. With quasi-permanent controls, the benefits of competitive markets would be lost, superior performance might not be rewarded; inefficiency would not be punished by losses or bankruptcy. The Administration's program emphasizes the creation of incentives for individuals and firms to act in a way consistent with energy security, rather than mandating particular behavior.

There are risks in the Administration's energy program. If the world price of energy were to fall dramatically, the United States would be left with high energy costs relative to those of other countries. If the demand and supply response to higher energy prices is far lower than predicted, then additional actions may be necessary. If the response is higher, of course, the oil tax can be reduced or eliminated. If the world price of oil fell to acceptable levels, and if imports were never interrupted, the program would have caused unnecessary costs. The program balances the extra costs from lack of preparation for import disruptions against the costs of preparing for them. The balance struck does not protect against all contingencies, but it will lead to less vulnerability to import cutoffs.

The energy program will speed the transition to a new energy reality that was started by the embargo. The energy situation in 1975 and beyond is markedly different from that of 1973 and before, because energy prices are much higher. These higher prices will call forth substantial increases in investment for both greater energy production and for producing less energy-intensive goods and services.

INTERNATIONAL ECONOMIC RELATIONS

Rising unemployment, rapid inflation, and the energy crisis have placed heavy strains on the fabric of international economic relationships. The pressures on the world capital markets resulting from the financing of large deficits of the oil-importing countries are growing and may threaten to undermine the past liberalization of capital flows among the industrial countries. The acquisition of large amounts of liquid assets by the Organization of Petroleum Exporting Countries (OPEC) has posed a risk of financial and exchange rate instability that must be contained through increased cooperation among the oil-importing countries as well as with the OPEC countries. Some encouraging steps have been taken in this direction. These efforts to deal cooperatively with the international financial problems created by the energy crisis are discussed in Chapter 7.

Economic problems experienced by many countries have created pressures for governments to adopt restrictive trade measures. The resolve of government leaders to avoid such self-defeating measures was considerably strengthened by a decision 3 years ago among U.S., Canadian, Japanese, and European leaders to convene a new round of multilateral trade negotiations to continue the process of trade liberalization begun after World War II. U.S. participation, however, was contingent upon passage of legislation by the Congress granting the President authority to undertake such negotiations. The Congress passed the Trade Reform Act of 1974 at the end of last year, opening the way for full-scale multinational negotiations to begin later this year.

The recent decline in economic growth around the world and the parallel increase in unemployment might make it more difficult for most governments to commit themselves in the coming year to major reductions in trade barriers. It is generally recognized, however, that any reductions resulting from such commitments will be sufficiently gradual to allow firms and workers to adjust to the change in competitive conditions over a period of years. Finally, the major focus of a new round of multilateral negotiations is likely to be on nontariff barriers, which are frequently motivated by objectives other than the protection of domestic industries. While the reduction of such barriers can make an important contribution to a more efficient allocation of world resources, it will frequently not require major changes in the structure of domestic industry.

CHAPTER 2

Economic Developments and Policy in 1974

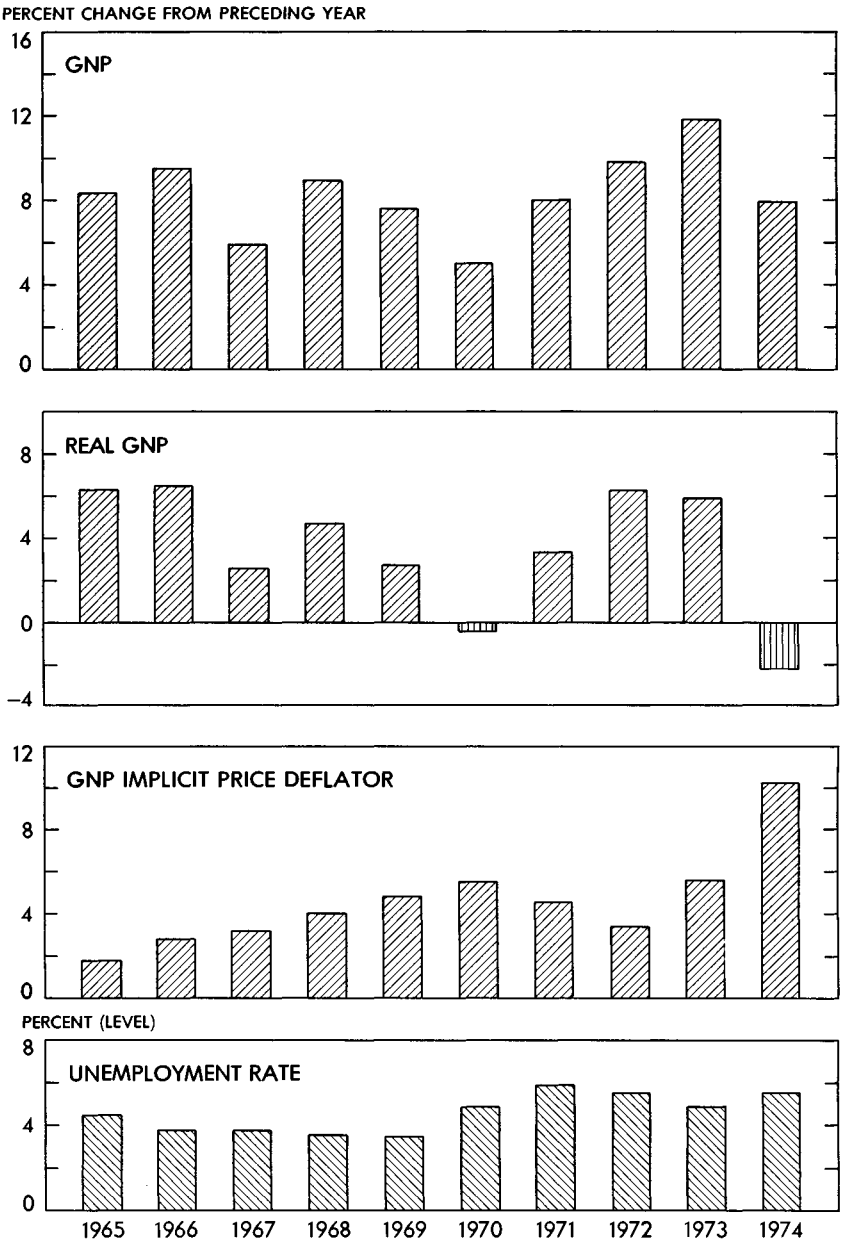
LAST YEAR WAS VERY DIFFICULT for the American economy. The decline in output and the rise in prices were the greatest for any peacetime year since the early post-World War II period. Unemployment rose and living standards fell (Chart 1). The year started with the economy in the grip of an energy crisis brought on by the Arab oil embargo and by the spiraling price of imported oil. The decline in output attributable to the embargo was subsequently halted and partly reversed. That recovery was not strong enough to overcome forces of contraction, some of which had been present earlier and some of which emerged only late in the year. In the closing months of 1974, demand and output were falling rapidly and unemployment was climbing sharply. The overall rate of inflation continued to be very high, although signs of a slower price rise could be seen in wholesale and retail markets.

The pronounced deterioration in demand and the severe recession have been the dominant events of the past few months, but for most of 1974 aggregate demand reflected numerous crosscurrents. Demand by business for new plant and equipment was strong for a good part of the year, especially in industries producing basic materials that had been in short supply. Supply shortages provided business with a potent stimulus to build up inventories, but this influence diminished as the year progressed and disappeared after the summer. Homebuilding suffered its worst decline in 30 years, mainly but not entirely because of disrupted mortgage markets. Consumers sustained large reductions in real income and cut back their real expenditures, especially for energy and automobiles.

At the start of 1974, economic policy makers found that the scope of policy had been stretched far beyond the traditional issues of demand management. In the forefront was energy policy, which sought to concentrate the embargo-caused shortage within the household sector in order to minimize the impact on the industrial sector and employment. Because of the worsening inflation, demand management continued to aim at restraint, even though it was recognized that the oil embargo and the steep rise in oil prices would mean a loss of real income. Much of this loss was already showing up at the start of 1974 in the form of reduced purchases of energy and energy-related goods and services by consumers, businesses, and governments.

Chart 1

Changes in GNP, Real GNP, GNP Price Deflator, and the Unemployment Rate



SOURCES: DEPARTMENT OF COMMERCE AND DEPARTMENT OF LABOR.

Looking at prospects for 1974 a year ago, the Administration saw a weak first half and a recovery setting in by midyear, led by an upturn in housing and a recovery of the automobile industry from its depressed condition at the start of 1974. The Administration also expected a slower rate of inflation after early 1974, associated with a deceleration of the price rise in petroleum and in farm and food products.

The recovery in the homebuilding industry did not materialize despite special efforts by the Administration—notably in May—to bolster mortgage markets. Housing starts sank progressively lower as interest rates soared to record highs in midsummer, draining funds out of thrift institutions. Consumers obtained no relief from inflation and continued to sustain cuts in real income despite an acceleration of the rise in wages. Although some recovery in the automobile industry occurred, the upturn was abruptly reversed in the final quarter of 1974. With domestic and foreign demand softening during the summer, supply conditions improved noticeably. Many basic materials that were in short supply at prices prevailing in midsummer could be obtained with little difficulty by the start of the fourth quarter, steel being a major exception.

The severe weakening of demand and the sharp decline in output in the fourth quarter came suddenly. By midsummer there had been a scaling down of expectations regarding the strength of demand in the near term; but the common expectation, shared by the Administration, was for slow growth. For example, at the time of the Summit Conference on Inflation in September there was a fairly broad consensus among economists that little change in output would occur in the ensuing few quarters, and most projections of real gross national product (GNP) fell within the narrow range of a small increase and a small decrease. That meant rising unemployment. There was little anticipation of the collapse of demand, output, and employment in the motor vehicle industry, or the less severe but widespread declines elsewhere that marked the closing months of 1974 and the start of 1975.

DEMAND AND OUTPUT

GNP in 1974 was 8 percent greater than it was in 1973, with a 10 percent rise in prices (as measured by the GNP deflator) and a 2 percent decline in output (Table 2). From the fourth quarter of 1973 to the fourth quarter of 1974, the price rise was 11.8 percent and the output decline, 5.0 percent. The pattern of overall demand and output change within the year shows pronounced decreases in the opening and closing quarters, but if attention is confined to real final sales the fourth quarter decrease dwarfed those in the first 3 quarters. Over half of that decrease was in consumer and business purchases of automobiles and trucks. Consumer spending apart from automobiles also slumped noticeably after having remained about unchanged in the first 3 quarters of 1973. The bulk of the fourth quarter drop in purchases of producers' durable equipment reflected lower purchases of autos and trucks, but spending on other types of equipment also declined.

The decrease in residential construction was substantial. One important reason for the smaller drop in total output than in total final sales from the third to the fourth quarter was the inability of motor vehicle producers to liquidate unwanted stocks of recently built automobiles.

TABLE 2.—*Changes in gross national product in current and constant dollars, 1968 to 1974*

[Percent]

Component	1968 to 1969	1969 to 1970	1970 to 1971	1971 to 1972	1972 to 1973	1973 to 1974[1]
CURRENT DOLLARS						
Percent change:						
Total GNP	7.6	5.0	8.0	9.8	11.8	7.9
Personal consumption expenditures	8.1	6.6	8.0	9.3	10.5	8.9
Durable goods	8.1	.6	13.8	14.0	10.1	−1.9
Nondurable goods	6.5	7.3	5.5	7.7	12.8	12.5
Services	9.7	8.2	8.5	9.2	8.4	9.6
Gross private domestic investment	10.3	−1.9	12.8	16.7	16.8	−.2
Business fixed investment	10.9	2.1	4.0	11.7	17.1	9.4
Residential structures	8.3	−4.3	37.2	26.2	5.9	−19.6
Government purchases	5.2	4.5	6.7	9.2	8.1	11.7
Federal purchases	.0	−2.6	1.5	7.5	1.6	9.2
State and local purchases	10.3	10.9	10.8	10.4	12.6	13.3
Addendum:						
Final sales	7.6	5.4	7.8	9.6	11.3	8.1
Domestic final sales	7.7	5.3	8.2	10.2	10.4	8.3
Change in billions of dollars:						
Inventory accumulation	.7	−3.3	1.8	2.2	6.9	−2.0
Net exports of goods and services	−.6	1.7	−3.8	−5.8	9.9	−1.9
CONSTANT (1958) DOLLARS						
Percent change:						
Total GNP	2.7	−.4	3.3	6.2	5.9	−2.2
Personal consumption expenditures	3.6	1.8	4.0	6.2	4.7	−2.2
Durable goods	5.3	−2.1	10.4	13.4	8.3	−9.0
Nondurable goods	2.1	2.6	2.3	4.2	3.8	−2.1
Services	4.5	2.7	2.9	5.0	3.8	1.4
Gross private domestic investment	5.0	−6.4	7.4	12.5	10.5	−8.5
Business fixed investment	6.0	−3.6	−.6	9.1	12.8	−.3
Residential structures	2.2	−6.3	31.1	17.9	−4.1	−27.1
Government purchases	−1.2	−4.5	.0	2.7	.9	1.0
Federal purchases	−5.9	−12.5	−5.3	.2	−6.1	−1.7
State and local purchases	4.0	3.6	4.5	4.7	6.0	2.9
Addendum:						
Final sales	2.7	−.1	3.1	6.0	5.5	−1.9
Domestic final sales	2.8	−.3	3.5	6.3	4.5	−2.4
Change in billions of dollars:						
Inventory accumulation	.3	−2.8	1.4	1.7	3.8	−2.6
Net exports of goods and services	−.8	2.1	−2.8	−2.5	7.6	4.4

[1] Preliminary.

Source: Department of Commerce, Bureau of Economic Analysis.

BUSINESS FIXED INVESTMENT

Demand for capital goods held up well into the summer but weakened considerably late in the year. Many capital goods industries were producing

at capacity last year, as were industries like steel, which are very heavily dependent on capital goods production. Large backlogs led to long waiting times for equipment deliveries. The strength of demand showed up in rising investment starts (in real terms) by manufacturers and public utilities from the first half to the third quarter, and by rising real appropriations by large manufacturers. New orders for capital goods in real terms remained high through July but declined after that, especially in the final quarter. Increasing costs of materials and labor were reflected in sharply accelerating price increases for capital goods, which were particularly large in the 6 months following the end of price controls on April 30.

Business held fairly closely in overall terms to the annual plant and equipment expenditure plans projected early in 1974. On the basis of 3 actual quarters and 1 anticipated quarter it appeared that companies in the Department of Commerce survey were raising outlays by 12 percent from 1973 to 1974, compared to a rise of 13 percent projected in the survey published in early March. It is possible that the very small shortfall in current dollars is larger in constant dollars, but the figures needed for a careful comparison in real terms are not available. In addition, data for the fourth quarter submitted by companies in October and November suggest that projected outlays were being scaled back from plans for the last quarter made earlier last year.

Because of the need to expand capacity, demand by manufacturing companies showed the greatest strength last year, with outlays up some 20 percent over 1973. About half represented a real increase, and most of it came from work started prior to 1974. Starts of new manufacturing projects in the first 3 quarters of 1974 were up about 11 percent over the 1973 average in current dollars, or approximately 3 percent in real terms. This followed real increases in starts amounting to 23 percent and 30 percent in 1972 and 1973. Several factors contributed to the deceleration. Profits (inclusive of the inventory valuation adjustment, or IVA) of manufacturing companies in the first 3 quarters of 1974 were unchanged from 1973 and were down substantially, excluding profits of domestic petroleum firms. Capacity utilization in 1974, while high, was a little lower than in 1973. Extremely high interest rates also discouraged new investment.

Electric and gas utilities substantially increased the physical volume of new projects started in the first 3 quarters of 1974. At the same time they made little change in the physical volume of plant and equipment outlays, scaling back those they had intended to make early last year. Data on backlogs suggest that the utilities have been stretching out projects already started and scheduled to be completed over the next few years. The utilities have suffered a sharp reduction in profits—the worst since before World War II—as a result of the leveling in energy consumption and the lag of rate adjustments behind cost increases. High interest rates have also led to deferrals of expenditures until financing conditions are more favorable. In addition, utilities have completely eliminated some projects from their long-term plans, but the magnitude of such cutbacks is uncertain.

The complete elimination of projects, particularly those scheduled to be started some years from now, probably reflects a reconsideration of the expected growth rate in energy consumption in the light of the rise in energy prices.

INVENTORY INVESTMENT

It is difficult to analyze the course of inventory investment over the past year or so because the official estimates themselves are subject to more than the usual uncertainties. During 1974 there were very large revisions in the statistics for 1973 and early 1974. Prior to the revision of the income and product accounts in July 1974, total inventory investment for 1973 was estimated to be $8.0 billion, whereas the current estimate for 1973 is $15.4 billion. The corresponding figures for the first quarter of 1974 are $5.5 billion and $16.9 billion. Before the revision the ratio of nonfarm stocks to output or to final sales in real terms as of the second quarter appeared to be close to the post-World War II average. After the revision the ratio looked clearly high. The difficulties with the statistics stem from inadequacies in the basic data pertaining to inventory book values and from difficulties in adjusting book values to GNP concepts. The problem has become complicated recently because, with the rapid rise in prices, many companies have been shifting their accounting systems to the last in, first out (LIFO) method. When prices are rising, the shift has the effect of reducing inventory book values, profits, and profits tax liabilities from what they are under the more commonly used first in, first out (FIFO) or average cost methods. The issue is discussed more fully below in connection with profits and the inventory valuation adjustment.

Changes in the accumulation of automobile stocks (treated more fully in connection with consumer spending) had a pronounced influence on the rate of nonfarm accumulation (Table 3). The general explanation of the nonauto inventory investment total is that stocks were low in relation to out-

TABLE 3.—*Change in nonfarm business inventories in constant (1958) dollars, 1973–74*

[Billions of dollars; seasonally adjusted annual rates]

Period	Total nonfarm	Auto	Other
1973: I	5.4	0.4	5.0
II	6.3	.7	5.6
III	6.2	−.7	6.9
IV	17.9	3.8	14.1
1974: I	8.7	−5.1	13.8
II	6.4	−2.7	9.1
III	3.9	−.3	4.2
IV	8.8	4.5	4.3

Source: Department of Commerce, Bureau of Economic Analysis.

put or sales through 1972 and 1973, and so businessmen made special efforts to increase their holdings. Expectations of further price increases strengthened the motive for further accumulation. The buildup of stocks appears especially heavy in late 1973 and early 1974; the latter period coincided with the phasing out and elimination of price controls. When final sales failed to improve after the first quarter, businessmen, realizing that stocks on hand and on order were too high, began to reduce their commitments and in the summer were making small production adjustments. Aggregate stocks were not cut in any quarter of 1974, however, and as sales weakened the pace of production cutbacks accelerated in the closing months of the year.

HOUSING

Despite initiatives by the Administration and Congress to support mortgage markets the downturn in starts and homebuilding that began in early 1973 continued last year. Housing accounted for fully half of the decline in real output from 1973 to 1974 and was the only major market sector to decline throughout the year. The current decline, which has clearly been the most pronounced since the end of World War II, followed one of the most extended rises in housing activity on record.

In the spring of 1974 there were signs that the housing downturn might be coming to a halt. The outflow of funds from thrift institutions during the summer of 1973—the process known as disintermediation—reversed in late 1973 and early 1974 as short-term interest rates declined. On a seasonally adjusted basis, starts leveled out in the neighborhood of 1.6 million units in the first half, while sales of single-family homes in the March–May period were almost one-fourth greater than they had been in the December–February period. The recovery was aborted, however, when market interest rates turned up again, reaching historical highs in July and August. Outflows from thrift institutions were heavier and lasted longer than they had in 1973, mortgage commitments were cut back, and starts fell to an average of 989,000 units in the fourth quarter. The large overhang of unsold units undoubtedly contributed to the low rate of starts.

CONSUMER INCOME AND SPENDING

From 1973 to 1974 real disposable income fell 2½ percent, the first annual decline since 1947. Both the decline and its magnitude were highly unusual. In other recession years real after-tax income rose by varying amounts, ranging from 0.4 percent in 1949 to 4.1 percent in 1970. The consequence of last year's real income reduction was a decline in real consumer spending of 2¼ percent, the first decrease since 1942. It is also possible that last year's drop in real spending was affected by the decline in real money balances and the stock market.

The decline in real disposable income occurred in spite of a 9.0 percent rise in nominal personal income and a rise of 8.6 percent in wages and salaries. Large as these increases were, they were smaller than the 11.4 percent increase in consumer prices (as measured by the deflator for per-

sonal consumption expenditures). Part of the rise in consumer prices was a reflection of the increased cost of energy to the Nation. The value of U.S. imports of crude oil and refined products alone rose by $18 billion last year, and a significant portion of that was reflected in higher consumer prices. The transfer of real income from U.S. residents to foreigners might have been compensated for by offsetting policies of demand management, but the Administration did not choose that course because of the seriousness of the inflation problem and the expectation of a recovery in economic activity during 1974.

There was also a shift of income last year from consumers to domestic oil producers; and to the extent that some of this did not return to the personal income stream via dividends and wages and salaries of workers newly employed by the oil companies or their suppliers and contractors, consumers sustained at least a temporary loss of purchasing power.

Last year's decline in real disposable income was greater than the decline in real personal income. Despite declines in real personal income in some earlier recessions, real disposable income has never declined (annually) because of the automatic working of the tax system. Last year's perverse behavior of the tax system reflected the unusual coincidence of a decline in real income in a period of rapid inflation. As inflation increased nominal income, taxpayers were drawn into higher brackets under the progressive tax system and were thus required to pay a larger share of their total income in taxes.

Last year's decline in aggregate real consumer spending was concentrated on expenditures for automobiles and parts and for energy. On balance, all other real spending was about the same as in 1973. Shifts in consumer spending during 1974 were dominated by the effects of the oil crisis in early 1974, by a partial recovery from those effects in the middle of the year, and by a sharp reduction in auto demand coinciding with the price increases for the new 1975 models in the last quarter of the year (Table 4).

Real consumer expenditures for energy (gasoline and oil, fuel oil and coal, electricity, and natural gas, measured in 1958 prices) fell about 7 percent from 1973 to 1974 after having risen every year in the postwar period. In the 3 preceding years these real outlays had risen at an annual rate of 4½ percent. The 1974 decline in energy consumption accompanied a 29 percent rise in energy prices as measured in the consumer price index (CPI), or 30 percent as measured by the applicable consumption deflator. The energy price rise was 16 percent greater than the rise in the overall CPI. This too was a reversal of postwar experience, which had seen fairly steady declines in the relative price of energy products. Real energy outlays declined in the first quarter of 1974 to a level 12 percent below the 1973 average. They increased steadily thereafter so that by the fourth quarter the decrease from the 1973 average was only 1½ percent.

On the surface the data for relative energy prices and real personal consumption expenditures for energy suggest a much greater price elasticity

TABLE 4.—*Personal consumption expenditures in constant prices, 1973–74*

[Seasonally adjusted annual rates]

Period	Personal consumption expenditures (billions of 1958 dollars)				Addendum: Dealer sales of new cars[2] (millions of units)		
	Total	Autos and parts	Energy[1]	All other	Total	Domestics	Imports
1973	552.1	50.8	42.6	458.7	11.5	9.7	1.8
1974[3]	539.9	40.8	39.6	459.5	8.9	7.5	1.4
1973: I	552.9	54.0	42.3	456.6	12.5	10.5	1.9
II	553.7	52.4	42.6	458.7	12.2	10.3	1.8
III	555.4	51.7	43.6	460.1	11.7	10.0	1.7
IV	546.3	44.9	42.1	459.3	9.8	8.2	1.7
1974: I	539.7	41.8	37.8	460.1	9.2	7.7	1.6
II	542.7	42.5	39.1	461.1	9.2	8.0	1.2
III	547.2	45.0	40.5	461.7	10.3	8.8	1.5
IV[3]	530.1	33.8	41.1	455.2	7.1	5.8	1.3
Percent change: 1973 to 1974[3]	−2.2	−19.7	−7.0	.2	−22.6	−23.0	−20.4

[1] Gasoline and oil, electricity and gas, and other fuel.
[2] Total dealer sales, including sales to persons, business, and government.
[3] Preliminary. Percent change for sales of new cars based on unrounded data.

Source: Department of Commerce, Bureau of Economic Analysis.

than had been widely expected at the end of 1973 and early 1974. As is pointed out elsewhere in the *Report*, part of the price increase was not measured, insofar as people had to wait in line to buy gasoline. In addition, part of the consumption response represented voluntary conservation efforts and the effect of Government regulations limiting automobile speeds to 55 miles per hour. Also, a milder than normal winter in 1973–74 caused fuel oil consumption to be abnormally low. One should note that the full consumption-dampening effects of higher oil prices have not yet occurred, since in the long run consumers have greater opportunities to adapt their consumption habits to the higher energy costs.

After having weathered the energy crisis in late 1973 and early 1974, auto demand in the fourth quarter of 1974 was in a state of collapse. Why this happened is still not entirely clear. About a year earlier, at the start of the 1974 model year, the consensus forecast projected a decline in auto sales from the boom rates of the 2 preceding years. The outbreak of the war in the Middle East in early October 1973, the embargo in late October, and the oil price rise in late December raised concern among consumers about the availability of gasoline and led to sharper than anticipated cutbacks in purchases, particularly for larger cars. Their concern was exacerbated by the gasoline shortages of January and February 1974. Gasoline, which was subject to price ceilings and to allocation by the Federal Energy Administration, could be purchased in much of the country only by waiting in line for long periods, and frequently it could not be obtained at all. Sales of new large cars were especially poor. Consumer resistance to large cars on the used car market was manifested in an unusual 15 percent decline in prices from September 1973 to March 1974. Increased supplies of gasoline at filling stations during March and an end to the embargo in late March brought

a pickup in domestic car sales and in car output as well. The sales improvement was concentrated in the larger cars, partly at the expense of small cars. Sales of imported cars, which had held up well during the winter, declined.

It was common knowledge during the summer that the new 1975 models would show large price increases. Purchasing of the lower-priced 1974 models was consequently quite heavy. In October, when the new models were introduced, sales fell far more than expected, and in November and December sales fell still more. With production substantially above the sales rate, auto manufacturers initiated massive production cuts and layoffs in order to reduce inventories.

The sales drop of late 1974 cannot be adequately explained by variables, such as income, income change, relative prices, and automobile stocks held by consumers, that have been used with some success in econometric estimates in the past. One suggested explanation is the extremely low state of consumer confidence late in 1974, but this would imply a lack of confidence over and above the uncertainties engendered by declining real incomes, rising unemployment, and rising prices. Two peculiarities of the data are worth pointing out. Suggested retail prices for new 1975 cars introduced in October 1974 were about $400 higher than prices for the outgoing 1974 models. Only two-thirds of the price rise is included in the price indexes, the other one-third representing federally mandated "quality improvement" associated with emission controls. Consumers may have viewed the entire amount of the rise as pure price increase. The second point concerns social security taxes. In 1974, the taxable earnings base under social security was raised by law from $10,800 to $13,200. This tax rise added $4.2 billion (annual rate) to Federal receipts, half of which affected personal income. According to the conventions used in the income and product accounts, the increase in taxes became fully effective in the first quarter of 1974. In actual practice, however, the increase in the tax meant larger payroll deductions in the fall of the year for persons affected by the rise in the base.

In terms of full-year changes consumers reduced their real spending on nondurable goods other than gasoline and fuel oil and on furniture and appliances but raised their spending on services. Purchases of clothing and shoes declined throughout the year, especially in the fourth quarter, while spending on furniture and appliances weakened after midyear.

Table 5 shows the distribution of real disposable income into saving, autos and parts, energy, and all other personal outlays. The slight increase in outlays other than for autos and parts and energy, in the face of declining real income from 1973 to 1974, raises this share at the expense of savings, energy, and autos and parts. The adjustment seems to have been facilitated by the fact that the 1973 share of income devoted to saving and to autos and parts, which are sometimes viewed as a form of saving and investing, was high by historical standards.

TABLE 5.—*Disposition of real disposable personal income, 1960–74*

[Percent]

Disposition of real income	1960–72 average	1973	1974 [1]
Total disposable income	100.0	100.0	100.0
Personal saving	6.6	8.2	7.8
Personal outlays	93.5	91.8	92.2
Personal consumption expenditures	91.0	89.1	89.5
Autos and parts	6.8	8.2	6.8
Energy [2]	6.9	6.9	6.6
All other	77.4	74.0	76.2
Transfers and interest	2.5	2.7	2.7
Addendum: Personal saving plus expenditures for autos and parts	13.3	16.4	14.6

[1] Preliminary.
[2] Gasoline and oil, electricity and gas, and other fuel.

Note.—Detail may not add to totals because of rounding.

Source: Department of Commerce, Bureau of Economic Analysis.

NET EXPORTS

Exports of goods and services rose 39 percent from 1973 to 1974, while imports increased by 43 percent according to preliminary estimates. As a consequence, net exports fell from $4 billion to $2 billion. In real terms exports rose by 8 percent while imports were up only 1 percent. The stability in real imports reflected the weak domestic economy and the reduction in petroleum imports. Implicit in the figures just cited is a worsening of the terms of trade as import prices rose 41 percent and export prices 29 percent. This deterioration in the terms of trade provides part of the answer to the decline in real incomes last year. The GNP deflator, which measures the price of domestic output, rose 10.2 percent from 1973 to 1974. However, prices of supplies available for U.S. purchasers (the implicit deflator of GNP less exports plus imports) rose 11 percent.

COMPARISONS OF OUTPUT CHANGE

More than a usual amount of uncertainty surrounds the behavior of real output in the first 3 quarters of 1974. The economic facts of these quarters and their interpretation are of some importance because they had a bearing on the stance of policy makers. The Administration believed that the growth of output was being constrained by supply factors as well as by weak demand. Despite the reduction in automobile production and in homebuilding, the steel industry, to cite one important example, was operating at capacity for much of the year, mainly because of high demand for capital goods. Consequently, given the behavior of other major indicators, there were genuine questions about how much output fell in the first quarter and whether it did not rise at all after that. Solid evidence supporting another pattern of real GNP behavior is not available, but there are suggestions that output possibly behaved a little differently, and that the recession phase of the cycle started later in the year. Table 6 compares growth rates (annualized) for real GNP and for the Federal Reserve Board (FRB) index of industrial production. Compared to real GNP the FRB index fell half as much over the 3 quarters.

563-280 O - 75 - 4

TABLE 6.—*Changes in industrial production, and nonfarm payroll employment and man-hours associated with two- and three-quarter declines in real gross national product, selected periods, 1948–74*

Period	Percent change			
	Real GNP	Industrial production	Nonfarm payroll employment	Private nonfarm employee man-hours
TWO-QUARTER CHANGES				
1948 IV to 1949 II	−1.9	−6.3	−2.7	−4.0
1953 II to 1953 IV	−1.8	−4.7	−1.1	−2.4
1957 III to 1958 I	−3.9	−9.6	−2.6	−4.2
1960 I to 1960 III	−.6	−3.7	−.3	−.4
1969 III to 1970 I	−1.1	−3.3	.6	−.3
1973 IV to 1974 II	−2.2	−1.2	.7	−.5
THREE-QUARTER CHANGES				
1953 II to 1954 I	−3.2	−7.6	−2.3	−4.4
1960 I to 1960 IV	−1.3	−6.0	−.9	−1.9
1973 IV to 1974 III	−2.7	−1.3	1.1	−.4
1973 IV to 1974 I	−1.8	−1.7	.2	−.4
1974 I to 1974 II	−.4	.5	.4	−.1
1974 II to 1974 III	−.5	−.1	.4	.1

Sources: Department of Commerce (Bureau of Economic Analysis), Department of Labor (Bureau of Labor Statistics), and Board of Governors of the Federal Reserve System.

It declined less than GNP in the first and third quarters of 1974, and in the second quarter rose rather than declined. The behavior of the two measures through the first 2 or the first 3 quarters of 1974 stands in marked contrast to other periods when real GNP has declined.* On those occasions the decline in industrial production was always sharper than the decline in real GNP. The behavior of real output in the first 3 quarters of 1974 also appears puzzling when labor market behavior is examined. Employment in nonfarm establishments rose by 1.1 percent from the fourth quarter of 1973 to the third quarter of 1974, whereas during the output declines of 1960 and 1953–54 employment also declined.

It might be argued that, even though the industrial sector held up relatively well in the first 3 quarters of 1974, output in the nonindustrial sector of the economy was weaker than in the past, partly because of the energy crisis. Quarterly output data by detailed industry are not available. The only comprehensive independent data are man-hours, which rose 0.3 percent in the nonindustrial sector from the fourth quarter of 1973 to the third quarter of 1974, in contrast to a 1.3 percent decline in man-hours in the industrial sector. This comparison as well as those cited above raise the possibility of labor hoarding. Many industries were unable to meet production schedules in 1974 because of various disruptions: materials shortages were common for much of the year, skilled labor was scarce in certain occupations, and strike activity rose. It is not clear why labor hoarding should have been especially large in the nonindustrial sector. Bottlenecks were

*The 3-quarter pattern would not be altered if real gross domestic product (GDP) were substituted for real gross national product. It should be noted that from the first to the second quarter, when GNP declined, GDP was unchanged.

presumably greatest in manufacturing, but manufacturing output and productivity held up better in the first 3 quarters of 1974 than did real GNP.

No indicator of output is free of measurement problems. The FRB index, for example, had problems last year associated with efforts by business to conserve electric power consumption because in some industries production is measured by power consumption. The measurement of changes in real GNP becomes very difficult when rates of inflation are very high and particularly when they change. This is especially so when output is not changing very much in either direction, which was the case for several quarters of 1973 and 1974. For the most part, real output is obtained by deflating various series measured in current dollars. Particularly in nonconsumption sectors there are numerous problems with the current dollar series. The deflation process itself also poses difficulties in these sectors. The various wholesale price indexes leave much to be desired, and the time distribution of prices embodied in the current dollar series takes an uncertain shape, subject to change from one quarter to another. As noted below, the measurement of inventory changes is an especially acute problem.

PRICES, WAGES, AND PROFITS

The 11.0 percent rise in the CPI from 1973 to 1974 was the largest annual increase since 1947 (Table 7). Although the rate of increase during the year was fairly steady from quarter to quarter, there were important shifts in the composition of the rises. Following the termination of controls on April 30, 1974, increases in food and fuel prices, which dominated changes in the CPI early in the year, gave way to increases over a broader range of goods and services. At the same time increases in wage rates began to accelerate, and since output per man-hour was falling, unit labor costs rose rapidly. But price increases for nonfinancial corporations as a group nearly kept pace with unit labor and nonlabor costs over the 3 quarters for which data are available, with the result that profits per unit almost matched those of 1973.

PRICES

Although prices of goods and services sold in final markets and measured by both the CPI and the GNP deflator advanced at consistently high rates from one quarter to the next during 1974 (Table 7), price weakness—in the form of slower rates of increase and, to some extent, price reductions—developed in the spring and summer in crude and intermediate industrial product markets. By late 1974 these changes were showing up to some degree in prices of finished goods. From September to December, prices of finished goods other than food in the wholesale price index (WPI) rose more slowly than in the preceding 3 months. So did the nonfood commodity component of the CPI, which reflected both the slower price rise at earlier stages of fabrication as well as some shading of trade margins associated with the softening in consumer demand. Still it will take several more months before the weakness in crude and intermediate industrial commodity prices is fully transmitted and reflected in the CPI and the GNP deflator.

TABLE 7.—*Changes in selected price measures during 1974*

[Seasonally adjusted]

Price measure	1974				1973 IV to 1974 IV[1]	1973 to 1974[1]
	I	II	III	IV[1]		
	Percent change; annual rate[2]					
GNP implicit price deflator:						
Total GNP	12.3	9.4	11.9	13.7	11.8	10.2
Private GNP	12.9	9.9	12.6	13.7	12.2	10.6
GNP fixed (1967) weight price deflator:						
Total GNP	12.7	11.1	12.7	11.9	12.0	10.6
Personal consumption expenditures	14.6	12.0	12.3	9.2	12.0	11.4
Consumer price index:						
All items	14.2	10.3	14.2	10.1	12.2	11.0
Food	19.4	3.1	12.3	14.6	12.2	14.4
Directly purchased energy[3]	70.7	22.3	3.7	1.2	21.6	29.3
All other items	8.6	11.9	15.3	9.6	11.3	8.3
	Percent contribution to change[4]					
Consumer price index:						
All items	100.0	100.0	100.0	100.0	100.0	100.0
Food	38.6	7.2	22.1	28.1	24.6	31.5
Directly purchased energy[3]	27.8	12.4	3.5	.4	11.4	16.2
All other items	33.6	80.4	74.4	71.5	64.0	52.4

[1] Preliminary for GNP price deflators.
[2] Changes in GNP price deflators based on quarterly data; changes during 1974 are from preceding quarter. Changes in consumer price indexes based on data for last month in quarter: for example, 1974 I change is change from December 1973 to March 1974.
[3] Gas and electricity, fuel oil and coal, and gasoline and motor oil.
[4] Detail may not add to totals because of rounding.

Source: Department of Labor, Bureau of Labor Statistics.

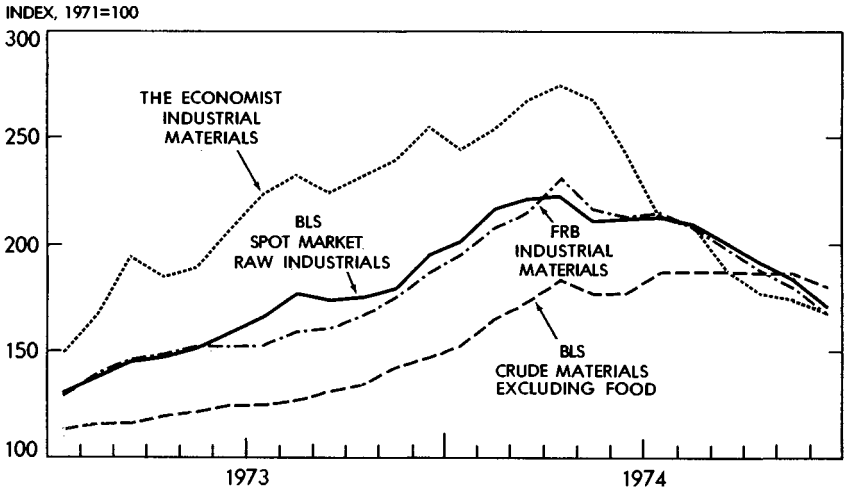
Crude and Intermediate Materials

Some slowdown in crude industrial commodity prices began to occur in August 1973, when the rate of growth of output was slowing, but it came to an abrupt end with the outbreak of war in the Middle East in October. From then until the spring of 1974, crude industrial materials prices rose sharply even though industrial output fell. Several measures of these prices appear in Chart 2. The continued existence of shortages and their role in limiting increases in output in early 1974 perhaps explain the continued rise in crude commodity prices in the face of the drop in production.

Chart 3 plots 6-month rates of change in the WPI indexes for intermediate industrial goods and for producer finished goods, and consumer finished goods other than foods. The rise in the intermediate materials price index began to slow in September. In the last 4 months of 1974 it rose at an annual rate of 9.6 percent, compared to 39.5 percent in the first 8 months of the year. This marked slowdown in the intermediate industrial commodity index, which accounts for 59 percent of the relative importance of the WPI industrial component, reflects widespread deceleration in many price series and absolute declines in others. Sizable declines were registered from September to December in such commodity categories as cotton, wool

Chart 2

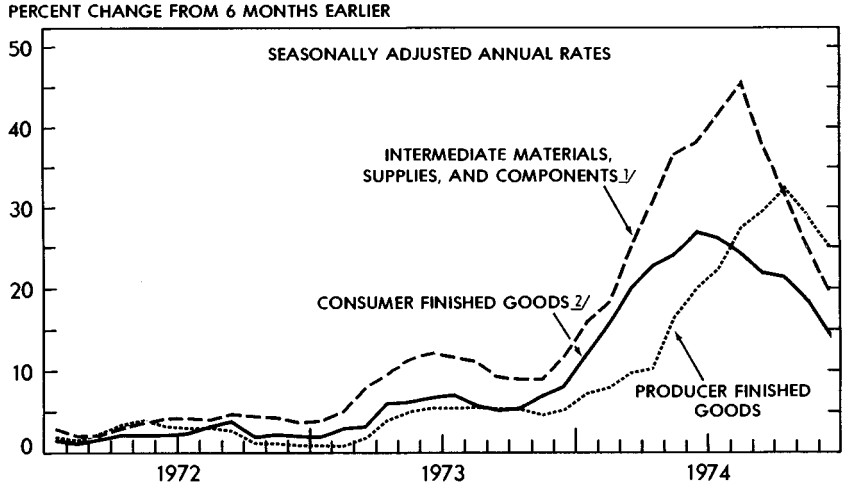
Prices of Raw and Crude Industrial Commodities



SOURCES: DEPARTMENT OF LABOR, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, AND THE ECONOMIST.

Chart 3

Changes in Wholesale Industrial Prices



1/EXCLUDES INTERMEDIATE MATERIALS FOR FOOD MANUFACTURING AND MANUFACTURED ANIMAL FEEDS.
2/EXCLUDES FOOD.

SOURCE: DEPARTMENT OF LABOR.

and manmade textile products, leather, lumber and wood products, building paper and board, and nonferrous metals.

These developments at the intermediate stage of production began to be reflected in finished goods prices late in the year. On the basis of 6-month spans, the WPI for consumer nonfood finished goods reached a peak rate of change of 26.8 percent in June, then slowed to about half that pace by the end of the year. At first the slowdown reflected the leveling and subsequent decline in gasoline prices and a marked slowdown in the rate of increase of apparel prices. By year-end the slowdown became more pervasive, extending to other consumer nondurable goods and to consumer durables, whose price increases had continued to accelerate generally for most of 1974.

Prices of foods at the farm level showed substantial increases in 4 of the last 6 months of 1974, caused largely by the bad weather that cut harvests below expectations. Between July and November sugar prices rose by 123 percent.

The decline in crude and intermediate industrial commodity prices together with the decline in manufacturing and trade margins more than offset the rise in food prices in the latter part of the year. This fact is reflected in the overall slowdown in the rise in prices of commodities in the CPI market basket during the last 3 months of the year. From September to December they increased at an annual rate of 10.3 percent compared to 14.0 percent in the preceding 3 months. The decline in the rate of increase for nonfood commodities was especially pronounced—7.3 percent as against 16.2 percent over the preceding 3 months.

Prices of services, the other major CPI component, also rose somewhat more slowly late in the year. They had accelerated to a rate a little over 13 percent in the summer, as a result of sharp increases in prices of medical care and other labor-intensive services, a marked boost in gas and electricity rates, and the rise in mortgage interest rates.

The deflator for gross national product is derived in large part from the CPI and to a lesser extent from various WPI components. It is calculated as a quarterly average, and during 1974 its movements roughly paralleled those of quarterly changes in the CPI, particularly when adjustments are made to hold constant the weights in the deflator. For the year as a whole the deflators on various bases increased somewhat less than the 11.0 percent advance registered by the CPI.

WAGE RATES

Private nonfarm wage rates, the major element in employee compensation per man-hour, rose 8.0 percent from 1973 to 1974 as measured by the Labor Department's adjusted average hourly earnings index for production and nonsupervisory workers. This was substantially less than the rise in consumer prices, and it followed a year of virtually no change in real wages similarly measured. The hourly earnings index (first column of Table 8) holds constant the mix of employment by industry and excludes the effect that

TABLE 8.—*Components of percent change in compensation per man-hour in the private nonfarm sector, 1965–74*

[Percent]

Period	Production workers			Employees other than production workers	Benefits, all employees	Compensation per man-hour, all employees
	Hourly earnings [1]	Overtime in manufacturing	Industry shifts			
Change from preceding year:						
1965	3.7	0.1	0.0	−0.4	0.2	3.6
1966	4.1	.3	.1	.7	.6	5.8
1967	4.9	−.3	.1	.9	.0	5.6
1968	6.3	.2	−.2	.7	.3	7.3
1969	6.6	−.1	.2	−.3	.3	6.7
1970	6.6	−.2	−.5	.7	.3	6.9
1971	7.1	.0	−.3	−.9	.7	6.6
1972	6.5	.1	−.8	−.4	.7	6.1
1973	6.4	.2	.2	−.2	.8	7.4
1974 [2]	8.0	−.2	−.1	.7	.3	8.7
Change from preceding quarter: [3]						
1973: I	5.3	.4	−1.0	2.8	3.9	11.4
II	6.5	.3	.8	−1.6	.3	6.3
III	7.7	−.4	.8	−1.3	−.7	6.1
IV	7.2	−.3	.4	.8	.4	8.5
1974: I	6.3	−.3	−.6	2.1	.4	7.9
II	9.7	−.1	−.8	2.6	−.1	11.3
III	11.0	.3	−.3	−1.1	.2	10.1
IV [2]	9.8	−.9	.1	−1.5	1.8	9.3

[1] Adjusted for overtime in manufacturing and interindustry shifts.
[2] Preliminary.
[3] Seasonally adjusted annual rates.

Source: Department of Labor, Bureau of Labor Statistics.

changes in overtime in manufacturing have on average hourly earnings. In the 4 quarters ending in the first quarter of 1974, increases in the index averaged 6.9 percent, fluctuating between annual rates of 6.3 percent and 7.7 percent. The rate of increase accelerated markedly after the end of controls on April 30, and averaged 10.2 percent during the last 3 quarters of 1974. The acceleration was widespread, affecting all major industry groups.

The wage-rate increases in the last two-thirds of 1974 reflected pressures placed on employers by workers whose real incomes had not kept pace with inflation during 1973 and early 1974. The high rate of past inflation, besides inducing a sharp rise in strikes, led to a considerable step-up in the size of first-year wage increases (Table 9). It also led workers and their unions to raise their expectations about the size of future price increases. To hedge against such prospects, broadened use was made of escalator clauses in labor agreements. During 1974, such clauses were newly incorporated in agreements covering 869,000 workers, the largest increase in workers so covered since 1971. At the end of December 1974, 5.3 million workers of the 10.3 million covered by private nonfarm collective bargaining agreements affecting 1,000 or more workers had escalator clauses in their contracts, the largest percentage of such workers ever covered by these clauses.

TABLE 9.—*Changes in major collective bargaining settlements, 1973–74*

Type of change and industry group	1973				1974 [1]			
	I	II	III	IV	I	II	III	IV
	Percent							
Current quarter settlements:								
First year wage change (annual rate)	5.5	6.2	5.8	5.5	6.2	9.2	11.1	10.3
Percent of workers covered by current quarter settlements [2]	12	18	10	13	5	15	16	5
	Quarterly percent changes							
Effective wage-rate change: [3]								
Total effective changes	1.2	1.9	2.3	1.2	1.2	2.9	3.4	1.5
Adjustment resulting from:								
Current decision	.3	1.0	.9	.5	.3	1.6	1.9	.7
Prior decision	.6	.7	.9	.3	.6	.9	.9	.3
Escalator provision	.1	.3	.5	.3	.3	.5	.5	.5
Manufacturing	1.0	1.9	2.1	1.6	1.4	3.5	3.0	1.9
Nonmanufacturing excluding construction	1.4	1.6	2.9	.8	1.3	1.7	3.9	1.2
Construction	.5	2.9	1.0	.3	.6	4.3	3.1	.8
Transportation and public utilities	1.3	1.5	4.0	.5	1.3	.9	4.7	.6
Wholesale and retail trade	1.3	1.9	2.0	1.0	1.4	3.7	3.1	1.8
Services	1.4	1.8	2.0	1.2	.9	1.9	2.5	1.0

[1] Preliminary.
[2] Percent of estimated number of workers under major collective bargaining settlements.
[3] Effective wage-rate changes are wage-rate changes actually going into effect per worker under major contracts in the respective quarters resulting from major collective bargaining settlements, made that calendar year, plus deferred increases in accordance with prior year contracts plus escalator adjustments.

Note.—Data relate to settlements covering 1,000 or more workers in private nonfarm industries.
Detail may not add to totals because of rounding.

Source: Department of Labor, Bureau of Labor Statistics.

The effect of broadened use of escalators and the sharp rise in 1974 in the CPI made wage increases effected through cost-of-living clauses a somewhat more important element in total wage increases in 1974 compared to 1973. The full effects of last year's record inflation on escalator clauses will not be evident until the final quarter of the current year.

Compensation per man-hour (last column of Table 8) is not adjusted for changes over time in manufacturing or for interindustry shifts, but it is a more useful indicator of labor costs to employers than adjusted hourly earnings because of its comprehensiveness. Despite the shift in employment away from high-wage industries in 1974 and the decline in manufacturing over time, compensation per man-hour rose more rapidly than adjusted hourly earnings in 1974. This was mainly a reflection of rapid wage increases for employees other than production workers.

NONFINANCIAL CORPORATIONS

Some perspective on recent wage changes and their relation to profits and prices is provided by Table 10, which pertains to nonfinancial corporations. The table shows first of all that unit labor costs rose almost three times as

TABLE 10.—*Changes in prices, costs, and profits per unit of output for nonfinancial corporations, 1969 to 1974*

[Percent change]

Item	1969 to 1970	1970 to 1971	1971 to 1972	1972 to 1973	1973 to 1974 [1]
Percent change per unit of output:					
Prices	4.5	3.6	1.9	3.4	9.5
Employee compensation	6.3	2.2	1.8	4.0	11.3
Compensation per man-hour	7.1	7.1	6.3	7.4	9.0
Output per man-hour	.8	4.8	4.4	3.2	−2.0
Other costs	11.9	4.6	−1.0	.7	9.5
Capital consumption allowances	9.6	4.8	.8	−.8	9.8
Indirect business taxes [2]	9.2	5.9	−2.4	.0	8.1
Net interest	31.0	.0	−2.6	8.1	12.5
Profits plus inventory valuation adjustment [3]	−17.9	10.9	9.8	4.1	−.7
Percent change in output	−1.4	3.2	8.5	7.8	−2.4

[1] Preliminary. Compensation per man-hour and output per man-hour estimated by the Council of Economic Advisers.
[2] Includes business transfer payments less subsidies.
[3] Before taxes.

Sources: Department of Commerce (Bureau of Economic Analysis) and Department of Labor (Bureau of Labor Statistics).

fast in 1974 as in 1973, a result not so much of rising compensation per man-hour as of the decline in productivity. The year-over-year decrease was the first since 1958, when this productivity series was begun. A second contrast with 1973 is the sharp rise in costs other than labor costs. Many of these in aggregate tend to be relatively fixed and consequently rise most rapidly per unit when output rises more slowly or declines. Third, even though real wages declined, so did profits. According to preliminary estimates, profits before taxes and including IVA fell about 3 percent, of which about 2½ percent represented the drop in output while the remainder reflected lower profits per unit. The profits performance is much poorer when allowance is made for petroleum profits. Domestic profits of oil companies approximately doubled from 1973 to 1974, while those of all other nonfinancial corporations fell by about 11 percent.

Last year was the second successive year in which the performance of both profits plus IVA and real nonfarm wages was mediocre or poor. The reason is that key elements of the 1973 and 1974 price rises reflected in the consumer prices originated outside the corporate sector. In 1973, a good part of the price rise reflected increased income of farm proprietors, while in 1974 the further rise was significantly affected by prices paid to foreign oil producers.

The profits just cited are those as measured in the national income accounts, and they include the IVA. Profits before taxes as reported by nonfinancial corporations to stockholders and used as the basis for calculating tax liabilities—that is, profits excluding the IVA—rose 16 percent, following increases of 21 percent in 1972 and 26 percent in 1973.

Profits data are currently subject to a good deal of uncertainty, whatever basis is used, because many companies are changing their methods of accounting. Even if there were no changes in accounting, the large increases in prices and shifts in their rate of increase would make the calculation of the IVA more difficult than usual.

Recent shifts in accounting methods for the purpose of reducing tax liabilities involve large sums and are probably more widespread than at any time since the years following the end of World War II. Most companies use the FIFO or average cost method of accounting, under which items are charged out to costs of goods sold in the same order that they are charged in to inventories. When prices are rising, the prices at which items are charged to costs will ordinarily be lower than the prices of items in closing inventories, that is, those purchased in the most recent period. The FIFO method has the effect of inflating closing inventories and profits. Under an alternative system, LIFO, the items bought in the most recent period are the first to be charged to costs, so that what is left in closing inventories will be lower in price. In periods of rising prices, profits will be lower in this system than those calculated under FIFO.

In calculating the inventory change component of GNP, the Department of Commerce attempts to estimate the change in the physical volume of inventories during a quarter and to value the change at prices current during the quarter. This calculation is an approximation of the results obtained through the LIFO system. The difference between the GNP inventory change figure and the change in the book value of inventories is the inventory valuation adjustment, and it has ordinarily been deducted from corporate profits and proprietors' income for purposes of national income calculation. It is sometimes referred to as "inventory profit." This portion of profit can be used for other investment or dividend payments only if the inventories are liquidated.

Profits are also affected by inflation through the use of historical costs rather than replacement costs in calculating depreciation. The Department of Commerce has estimated that, other things being equal, the use of replacement rather than historical costs to calculate depreciation would reduce the share of profits as a percentage of gross corporate product in 1974 by approximately 3 percentage points.

REAL INCOME

Table 11 brings together several measures of nominal and real income and earnings, some of which were discussed earlier in this chapter. From 1973 to 1974, per capita personal income in real terms (1958 dollars) declined 2.8 percent, by far the largest of the four annual declines since the early post-World War II period. For reasons already noted, real taxes per capita also rose so that real per capita disposable income declined by 3.4 percent.

Transfer payments on a per capita basis continued to increase rapidly from 1973 to 1974, although the increase in real terms (5.7 percent) was

TABLE 11.—*Changes in selected measures of income, earnings, and taxes, 1969–74*

[Percent change; annual rate]

Measure	Current dollars			Constant dollars [1]		
	1969 to 1973	1972 to 1973	1973 to 1974 [2]	1969 to 1973	1972 to 1973	1973 to 1974 [2]
Per capita personal income measures:						
Personal income	7.9	10.9	8.3	3.5	5.0	−2.8
Wage and salary disbursements and other labor income	7.2	9.5	8.0	2.8	3.8	−3.0
All other earned income	7.7	15.9	4.9	3.4	9.9	−5.8
Transfer payments	14.6	13.4	17.9	9.9	7.6	5.7
State unemployment insurance	18.9	−23.1	70.0	15.0	−26.3	50.0
Other	14.5	15.4	15.9	9.9	9.1	4.1
Personal contributions to social insurance	11.8	23.0	11.3	7.3	16.8	.0
Personal taxes	5.7	5.4	12.1	1.4	.0	.6
Disposable personal income	8.2	11.8	7.6	3.8	6.0	−3.4
Compensation per man-hour:						
Private nonfarm employees [3]	6.8	7.4	8.7	1.7	1.1	−2.1
Earnings of production or nonsupervisory workers in private nonfarm industries:						
Average hourly earnings	6.6	6.8	7.7	1.6	.7	−3.1
Average weekly earnings	6.1	6.8	6.2	1.1	.5	−4.3
Median usual weekly earnings of full-time wage and salary workers: [4]						
All 16 years and over	[5] 6.0	.....	6.3	[5] 1.2	.....	−4.1
Males 25 years and over	[5] 6.3	.....	7.9	[5] 1.7	.....	−1.9
Females 25 years and over	[5] 7.7	.....	8.3	[5] 2.8	.....	−2.2
Median annual family income:						
All families	6.3	8.4	.....	1.3	2.1	.....
Families with male head	6.8	9.3	.....	1.8	2.9	.....
Families with female head	4.7	8.5	.....	−.2	2.2	.....
Addendum:						
Personal consumption expenditures deflator	4.3	5.6	11.3	.....	.....	.....
Consumer price index	4.9	6.2	11.0	.....	.....	.....

[1] Per capita personal income measures deflated by the personal consumption expenditures deflator. All other measures deflated by the consumer price index.
[2] Preliminary.
[3] Compensation excludes employer contributions to social insurance.
[4] Data related to earnings in May of each year.
[5] Changes from 1969 to 1972. Data for 1973 not exactly comparable with data for earlier years because of changes introduced in 1973 in the collection and tabulation of the May data.

Sources: Department of Commerce (Bureau of Economic Analysis and Bureau of the Census), Department of Labor (Bureau of Labor Statistics), and Council of Economic Advisers.

below the average for recent years. Transfers now make up more than 12 percent of personal income. To some extent the rise in transfer payments reflected the onset of the recession. The increase in unemployment not only led to a 50 percent increase in real unemployment insurance benefits, but it also probably increased the number of persons eligible for welfare benefits such as food stamps and Aid to Families with Dependent Children (AFDC). Excluding unemployment benefits, real per capita transfers rose by 4.1 percent.

The major factor underlying the decline in real per capita personal income was the sharp decline in real earnings of wage and salary workers, whose income makes up about 70 percent of personal income. This decrease in real earnings of wage and salary workers is also evident in other available measures of earnings from various sources.

Real hourly earnings of production or nonsupervisory workers in private nonagricultural establishments fell, and their real weekly earnings fell still more, since hours worked per week for this group declined from 37.1 in 1973 to 36.6 in 1974. The more comprehensive measure of employees' real earnings, compensation per man-hour, declined by 2.1 percent excluding employers' contributions for social insurance.

Since information is not given on the characteristics of persons holding the jobs included in the establishment series, one cannot tell to what extent average earnings are affected by changes in the experience or skill mix of workers. Over the past decade the rapid rise in the proportion of workers with less market experience—young people and women—had a depressing effect on average annual earnings.

What the monthly establishment data do not show can be seen in earnings data that are now being collected each May from households. They provide information on all wage and salary workers, with specific demographic breakdowns. As indicated in Table 11, from May 1973 to May 1974 the usual weekly earnings of all full-time workers declined on the average by about the same amount as weekly earnings of production workers. However, the decline for adult men and adult women was not as great as the overall drop.

Data on earnings or income of families and individuals are not yet available for 1974. Undoubtedly the real income of most groups fell and probably by more than weekly earnings would suggest, because of the increase in unemployment and the resulting decline in weeks worked per year. Income data on an annual basis are now available for 1973, which was a year of strong increase in real family income compared to the whole period 1969–73. The gains of 1973 may well have been canceled, however, by the losses of 1974.

LABOR MARKET DEVELOPMENTS

Labor markets underwent major changes last year (Table 12). From the fourth quarter of 1973 to the fourth quarter of 1974 unemployment increased by 1.8 million and the unemployment rate increased from 4.7 to 6.6 percent (Chart 4). Accompanying this rise was a continued strong growth in the civilian labor force participation rate, particularly among women and youths. Civilian employment rose through most of the year but fell very sharply in the last 2 months of 1974, so that in December it was half a million lower than a year earlier. An analysis of the general nature of unemployment appears in Chapter 3.

The rise in unemployment during 1974 was not continuous, but occurred mainly in two separate spurts, from the fourth quarter of 1973 to January 1974 and in the 4 months after August 1974. The year started with a sharp rise in the unemployment rate, from 4.7 percent in the fourth quarter of 1973 to 5.2 percent in January 1974, largely as a result of layoffs attributable directly or indirectly to the energy crisis. The employment effects

TABLE 12.—*Labor market indicators, 1973–74*

[Percent; seasonally adjusted]

Indicator	1973	1974	1973 IV	1974 I	1974 II	1974 III	1974 IV
	Millions of persons						
Civilian labor force	88.7	91.0	89.8	90.5	90.6	91.4	91.8
Employment	84.4	85.9	85.6	85.8	86.0	86.4	85.7
Unemployment	4.3	5.1	4.3	4.7	4.7	5.0	6.1
	Percent						
Civilian labor force participation rate [1]	60.8	61.2	61.1	61.3	61.1	61.4	61.4
UNEMPLOYMENT RATES							
All civilian workers	4.9	5.6	4.7	5.1	5.1	5.5	6.6
Labor force time lost [2]	5.2	6.1	5.2	5.6	5.6	6.0	7.2
Unemployed 15 weeks or longer [3]	.9	1.0	.9	.9	1.0	1.1	1.2
State insured [4]	2.7	3.6	2.7	3.2	3.3	3.4	4.3
Occupation							
White-collar workers	2.9	3.3	2.9	3.1	3.1	3.3	3.7
Blue-collar workers	5.3	6.7	5.4	6.0	6.1	6.6	8.3
Industry							
Nonagricultural private wage and salary workers [5]	4.8	5.7	4.8	5.3	5.3	5.6	6.9
Construction	8.8	10.6	8.8	8.6	10.0	11.3	13.4
Manufacturing	4.3	5.7	4.2	5.0	5.0	5.6	7.5
Durable goods	3.9	5.4	3.9	4.8	4.7	5.0	7.3
Nondurable goods	4.9	6.2	4.8	5.4	5.3	6.5	7.9
Transportation and public utilities	3.0	3.2	3.0	2.9	3.1	3.4	3.6
Wholesale and retail trade	5.6	6.4	5.5	6.0	6.1	6.4	7.3
Finance and service industries	4.3	4.6	4.3	4.6	4.3	4.5	5.2
Government workers	2.7	3.0	2.6	2.7	3.1	3.0	3.2
REASON FOR UNEMPLOYMENT [6]							
Job losers	1.9	2.4	1.8	2.2	2.2	2.3	3.1
Job leavers	.8	.8	.8	.8	.8	.8	.9
Reentrants and new entrants	2.2	2.3	2.1	2.1	2.2	2.4	2.6
STRIKE ACTIVITY							
Days idle as percent of estimated working days [7]	.14	.24	.16	.09	.34	.33	----

[1] Civilian labor force as percent of civilian noninstitutional population.
[2] Hours lost by the unemployed and persons on part-time for economic reasons as a percent of potentially available labor force hours.
[3] Unemployment rate calculated as a percent of civilian labor force.
[4] Insured unemployment under State programs as a percent of covered employment.
[5] Includes mining not shown separately.
[6] Unemployed as percent of civilian labor force.
[7] Not seasonally adjusted. 1974 is preliminary.

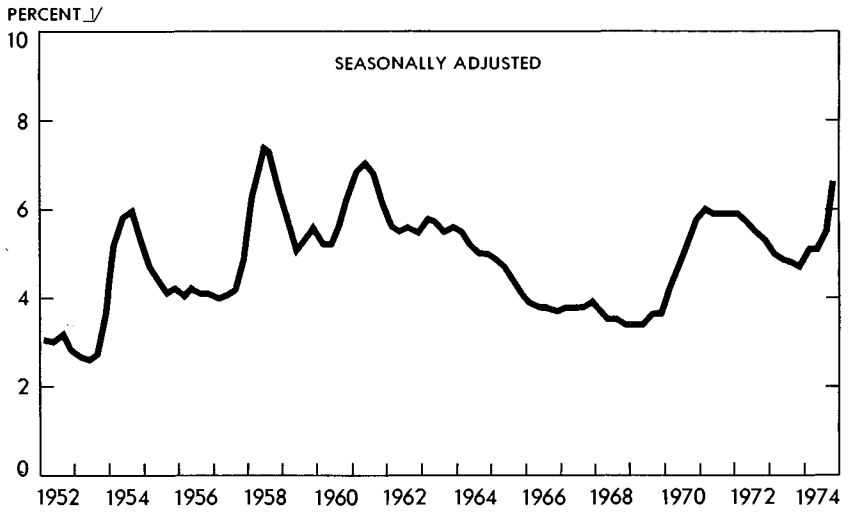
Source: Department of Labor, Bureau of Labor Statistics.

of the energy crisis tended to be highly concentrated. During the period of the embargo, from November 1973 to March 1974, the number of private nonfarm payroll jobs fell by 8,000, but the declines in energy-related sectors were substantially greater (Table 13).

A partial recovery from the worst effects of the energy crisis helped stabilize the unemployment rate at approximately 5.2 percent in the first half of 1974. In the spring and summer quarters employment showed moderate increases that reflected divergent trends. Continued weakness in housing brought steady decreases in employment in contract construction,

Chart 4

Unemployment Rate



1/UNEMPLOYMENT AS PERCENT OF CIVILIAN LABOR FORCE; QUARTERLY.

SOURCE: DEPARTMENT OF LABOR.

and sluggish demand and the need to trim inventories brought decreases in employment in nondurable manufacturing. Employment in motor vehicles regained some of the ground lost in the winter, but durable goods employment was otherwise almost unchanged. The rise in nonfarm employment that did occur was attributable largely to trade, services, and State and local governments.

The unemployment rate increased rapidly during the last few months in the year, rising from 5.4 percent in August to 7.2 percent in December. In the fourth quarter the general weakening in demand and output brought widespread layoffs in both nondurable and durable manufacturing—notably in motor vehicles—as well as in trade. The continuing decline in construction exacerbated the deteriorating situation.

The increase in unemployment in the last quarter was very large among blue-collar workers, particularly operatives, for whom the jobless rate increased by 2.5 percentage points to 9.6 percent. However, even wholesale and retail trade experienced a sharp seasonally adjusted increase in unemployment, especially in December, a reflection of the weakness in retail sales.

From 1973 to 1974 the civilian labor force rose by 2.6 percent, a very large increase by postwar standards. The 2.2 percent rise from the fourth quarter of 1973 to the fourth quarter of 1974 was less than the increases during 1972 and 1973 but slightly above the trend rate. Continuing past

TABLE 13.—*Changes in employment in the private nonfarm economy: total and selected energy-related industries, November 1973 to March 1974*

[Seasonally adjusted]

Industry	Change in employment	
	Number (thousands)	Percent
Total private nonfarm	−8	0.0
Energy-using:		
Motor vehicles and equipment	−114	−12.2
Gasoline service stations	−67	−10.4
Motor vehicle dealers, retail	−57	−6.7
Other transportation	−23	−14.3
Hotel and other lodging places	−21	−2.3
Substitutes for imported oil:		
Oil and gas extraction	9	3.2
Coal mining	2	1.2

Source: Department of Labor, Bureau of Labor Statistics.

trends, the civilian labor force participation rate increased in 1974. It rose 0.4 percentage point to the post-World War II record high level of 61.2 percent. Participation rates did not increase among all demographic groups. The rate decreased for men, aged 55 and over, chiefly as a consequence of earlier retirement. However, the trend toward earlier retirement was slowed, presumably because of the effects of inflation on fixed incomes, including private pensions. Participation rates for women aged 25 to 54 continued their dramatic long-run increase, with the rate of increase somewhat higher than in recent years. As with older men, labor force participation rates decreased for women over 55 years of age. The rate increased sharply for young persons aged 16 to 24 of both sexes, reflecting the continued increase in participation for students, later marriage for women, a later age at which they begin childbearing, and greater participation among young mothers.

FISCAL POLICY IN 1974

Fiscal policy turned out to be tighter during 1974 than was anticipated last February in the 1975 budget, largely because the unanticipated acceleration of inflation lifted Federal revenues. In February 1974, a rising budget deficit was projected for calendar 1974. The projected increase in the deficit from 1973 to 1974, however, was not due to an expansionary shift in fiscal policy. Rather, the operation of the automatic stabilizers was expected to raise the budget deficit because it was anticipated that the economy would grow at less than its potential. The fact that economic activity was weaker than projected should have caused an even larger deficit automatically at given rates of inflation. In fact, however, there was no automatic fiscal stabilization to cushion the decline in real income since the revenue-reducing effect of lower real incomes was offset

by the revenue-increasing effect of inflation. Furthermore, the growth in real Federal spending was reduced. As a result, the actual deficit remained small and showed no tendency to rise until the fourth quarter of 1974.

In February 1974, the Administration estimated that unified budget outlays would be $274½ billion and receipts $270 billion for fiscal 1974, leaving a deficit of $4½ billion. While the deficit turned out to be only $1 billion lower, actual outlays fell $6 billion below the February estimate. The $3-billion increase in proprietary receipts, primarily oil and gas royalties and lease payments, is treated as an offset to outlays in the unified budget, and this accounts for part of the decline. Although the rate of growth of outlays was 1 percentage point less than that of GNP from fiscal 1973 to fiscal 1974, receipts grew by 4 percentage points more. The disproportionate rise in receipts is attributable largely to high rates of inflation.

FEDERAL EXPENDITURES

On the national income accounts (NIA) basis, actual Federal expenditures rose from $264 billion in calendar 1973 to $298½ billion in 1974 (Table 14), a rise of 13 percent. This increase was unusually large in nominal terms and exceeded the rise in GNP; but it was small in real terms, considering the 10 percent rise in the GNP price deflator from 1973 to 1974. In fact, the use of specific deflators appropriate for the major components of Federal spending suggests that real Federal expenditures increased by only 2 percent from 1973 to 1974. Furthermore, even in nominal terms most of the

TABLE 14.—*Federal Government receipts and expenditures, national income accounts basis, calendar years 1973–74*

[Billions of dollars]

Receipt or expenditure category	1973	1974	
		February 1974 budget projection [1]	Actual [2]
Federal Government receipts	258.5	289.8	291.1
Personal tax and nontax payments	114.1	131.8	131.2
Corporate profits tax accruals	43.7	43.3	49.1
Indirect business tax and nontax accruals	21.2	26.9	22.0
Contributions for social insurance	79.5	88.6	88.7
Federal Government expenditures	264.2	301.5	298.6
Purchases of goods and services	106.6	117.0	116.4
Defense	74.4	78.4	78.6
Other	32.2	38.6	37.9
Transfer payments	95.5	116.8	117.0
Grants-in-aid to State and local governments	40.5	45.9	43.7
Net interest paid	16.3	20.5	18.8
Subsidies less current surplus of government enterprises	5.3	1.4	2.1
Less: Wage accruals less disbursements	.0	.0	−.5
Surplus or deficit (−)	−5.6	−11.7	−7.6

[1] February 1974 projected percent changes applied to revised 1973 actual data. Excludes transfer of $2.1 billion worth of rupees to the Indian Government, which was included in the February budget. This transfer was not included in NIA expenditures as was originally anticipated.

[2] Preliminary.

Note.—Detail may not add to totals because of rounding.

Sources: Department of Commerce (Bureau of Economic Analysis) and Office of Management and Budget.

major expenditure components turned out to be lower than projected in February; only transfer payments were slightly higher.

The distribution of Federal expenditures in 1974 continued to shift toward transfer payments and away from purchases of goods and services, especially for defense. While purchases rose 9 percent from 1973 to 1974, transfer payments increased by 23 percent. The small rise that did occur in defense purchases was due largely to increased costs of operation and maintenance, including higher fuel costs. As in the previous year, the effect of pay increases on personnel expenditures was offset to some extent by the continuing reduction in the size of the Armed Forces, as the transition to an all-volunteer system was completed. Federal nondefense purchases rose, in part because of the 4.8 percent pay increase for civilian employees in October 1973 and the 5.5 percent increase in October 1974. While net purchases by the Commodity Credit Corporation declined, other nondefense purchases, including expenditures for medical research and veterans' hospitals, rose.

Several factors contributed to the large rise in Federal transfer payments to persons from 1973 to 1974. Old-age, survivors', and disability (OASDI) benefit rates were increased by 7 percent in April and by an additional 4 percent starting in July 1974. From 1973 to 1974, the number of beneficiaries of old-age and survivors' insurance rose by 3½ percent while the number of disabled beneficiaries climbed by more than 9 percent. The increase in social security benefits under the OASDI programs thus accounted for almost one-third of the $21-billion increase in Federal transfer payments to persons. In addition, hospital and medical insurance benefits (medicare) increased by $2.5 billion. The supplemental security income program, which was initiated in 1974 to replace federally aided State programs of assistance to the aged, blind, and disabled, increased Federal transfer payments by $4 billion while reducing grants to State and local governments by $1½ billion. The costs of the Food Stamp Program climbed by over $1 billion to $3½ billion in 1974. Unemployment insurance benefits jumped by $3 billion, and smaller increases occurred in veterans' benefits and in civil service and military retirement programs. Net transfer payments to foreigners increased little.

As a result of nonrecurring factors, mainly the shift to transfers under the supplemental security income program, Federal grants-in-aid to State and local governments grew at a slower rate than total expenditures from 1973 to 1974, increasing from $40½ billion to $44 billion. Increases in education programs, some of which had been deferred in 1973, and in medicaid accounted for most of the $3½-billion rise. Grants for general revenue sharing continued at the rate of $6 billion per annum.

FEDERAL RECEIPTS

Federal receipts (NIA) rose from $258½ billion in calendar 1973 to an estimated $291 billion in calendar 1974, an increase of 12½ percent compared to the 8 percent rise in nominal GNP. The rise in receipts during a

563-280 O - 75 - 5

period when real GNP declined by 2 percent is explained by the disproportionate impact of 10 percent inflation on the tax liabilities of individual taxpayers and corporations.

In particular, inflation has raised the share of personal income that is paid in Federal income taxes because personal exemptions, low-income allowance and standard deduction limits, and tax brackets are fixed in nominal terms. Income taxes account for about 95 percent of personal tax and nontax payments in Table 14. Personal income minus transfer payments—a rough proxy for income subject to the personal income tax—rose 8 percent from 1973 to 1974, but this increase produced a 15 percent jump in personal tax receipts. The 6½ percent rise in the real Federal tax burden of persons was distributed regressively by income classes, because those generally low- and moderate-income taxpayers who do not itemize deductions are subject to larger percentage increases than most higher-income individuals.

Inflation may have increased the average tax rate of corporations even more than that of persons. As explained earlier in this chapter, during periods of rising prices, taxable book profits tend to be overstated because the cost of goods sold does not fully reflect the current replacement costs of inventories and of capital goods used in production. Even though profits as measured on the NIA basis did not rise from 1973 to 1974, and although profits, including not only the inventory valuation adjustment but also a "depreciation valuation adjustment," have fallen, corporate profits tax accruals rose by 12½ percent because book profits increased by 15 percent. The shift of many firms to LIFO inventory accounting prevented this disparity from being even greater and is estimated to have reduced corporate profits tax accruals by $2 billion below what they would otherwise have been in 1974.

Federal contributions for social insurance rose by 11½ percent in 1974. Social security contributions (OASDHI) account for about three-fourths of the receipts for social insurance, with other retirement programs and unemployment insurance taxes making up the bulk of the remainder. Since the number of workers contributing to social security at any time during the year is estimated to have increased by 2 percent from 1973 to 1974, almost all the rise in contributions for social security was due to the increase in taxable wages and salaries per employee. The maximum amount of annual earnings subject to the 11.7 percent payroll tax on employers and employees combined was raised from $10,800 in 1973 to $13,200 at the beginning of 1974. This statutory increase accounted for about $4 billion of the $9-billion increase in contributions for social insurance. The tax base was raised to $14,100 at the start of 1975.

BALANCES OF THE FEDERAL BUDGET

Actual Federal budget deficits (NIA) remained remarkably small and constant until late in 1974. From the third quarter of 1973 through the third

quarter of 1974 the seasonally adjusted quarterly deficits clustered in the $1-billion to $3-billion range (Table 15), even though the unemployment rate rose from 4.8 percent to 5.5 percent.

The full-employment surplus continued to rise through the third quarter of 1974 as it had throughout 1973, with full-employment receipts rising by about 2 percentage points faster per quarter than full-employment expenditures. Over the entire 6 quarters from the first quarter of 1973 to the third quarter of 1974 the full-employment surplus rose by $35 to $36 billion. The increase was equivalent to 12 percent of 1974 full-employment expenditures. Only once since the Korean war was there a comparable rise in the full-employment surplus relative to expenditures, and this occurred between the final quarter of 1958 and the first quarter of 1960. However, very little of the shift in 1958–60 was due to inflation. When the rate of inflation is low, changes in the full-employment surplus are a measure of the budgetary implications of shifts in discretionary fiscal policy at the constant level of resource utilization expressed in official estimates of potential GNP at current prices. The higher the rate of inflation, the less this interpretation applies, since the effect of inflation on either the actual budget or the full-employment budget is generally not neutral.

In fact, changes in the full-employment budget surplus in the last 2 years have not been due mainly to discretionary fiscal policy shifts but to changes in the relation between Federal expenditures and receipts that have resulted from high and variable rates of inflation. Since the first quarter of 1973 there have been no major statutory tax changes, apart from annual increases in the taxable earnings base under social security. Hence, most of the increase in the Federal full-employment budget surplus has been due to the slow growth of real Government expenditures in 1973 and in the first half of 1974, and to unlegislated increases in taxation through the rise in average tax rates induced by inflation.

If inflation had continued at the same 7.4 percent annual rate that was registered in the GNP deflator from the fourth quarter of 1972 to the fourth quarter of 1973, and if the actual IVA is used, then estimated full-employment receipts would have been $8½ billion lower in the third quarter of 1974 (annual rate). Since the IVA would, in fact, have been considerably less than the $51.2 billion recorded in the third quarter if the rate of inflation had not risen, allowing for this fact would reduce full-employment tax receipts by another $5 to $7 billion in that quarter, because taxable corporate profits would have been lower. (Taxable corporate profits at full employment since 1973 are estimated at 8¾ percent of potential GNP in current dollars plus the actual IVA.) If prices had risen less rapidly in 1974, the measured shift toward restraint would have been less, since unanticipated increases in inflation initially raise Federal expenditures much less than Federal taxes, which respond almost immediately.

Uncertainty about the rate at which potential output grew in 1974 affects the reliability of the full-employment budget estimates more than in pre-

vious years. If potential GNP in constant dollars, that is, the output normally consistent with 4 percent unemployment, grew by only 3 percent from the fourth quarter of 1973 to the fourth quarter of 1974 because of the reduced availability of energy supplies, the full-employment budget surplus would be $2½ billion lower in the third quarter of 1974 than currently estimated. In the full-employment estimates in Table 15, potential output growth was assumed to be 4 percent each year through 1974.

After adjusting for increases in the rate of inflation and the possibility of reduced potential growth at the rate of 3 percent in 1974, the full-employment budget surplus would still have grown by between $17 billion and $20 billion from the first quarter of 1973 to the third quarter of 1974, or by around $3 billion per quarter. Even at its 1973 rate, inflation would have caused the increase in full-employment receipts greatly to exceed the rise in full-employment expenditures last year.

An additional complication arises because the composition of expenditures has changed increasingly from purchases of goods and services to transfers. As recently as 1969, Federal purchases were more than half of expenditures;

TABLE 15.—*Actual and full-employment Federal and State and local government receipts and expenditures, national income accounts basis, calendar years 1971–74*

[Billions of dollars; seasonally adjusted annual rates]

Calendar year	Federal Government			State and local government			Combined surplus or deficit (−)
	Receipts	Expenditures	Surplus or deficit (−)	Receipts	Expenditures	Surplus or deficit (−)	
Actual:							
1971	198.5	220.3	−21.9	152.2	148.8	3.4	−18.5
1972	227.2	244.7	−17.5	177.2	164.9	12.3	−5.1
1973	258.5	264.2	−5.6	193.5	184.4	9.2	3.5
1974 [1]	291.1	298.6	−7.6	207.7	206.0	1.7	−5.9
1973: I	249.1	260.2	−11.2	190.3	177.0	13.2	2.1
II	255.0	262.4	−7.4	192.0	181.7	10.4	3.0
III	261.8	263.4	−1.7	194.6	186.2	8.4	6.7
IV	268.3	270.6	−2.3	197.3	192.7	4.6	2.3
1974: I	278.1	281.0	−2.8	200.6	197.4	3.2	.4
II	288.6	291.6	−3.0	205.3	203.3	2.0	−1.0
III	302.8	304.7	−1.9	210.9	208.8	2.1	.2
Full-employment: [2]							
1971	216.4	217.9	−1.5	159.3	148.8	10.5	9.0
1972	232.4	242.7	−10.3	182.0	164.9	17.2	6.9
1973	265.9	263.1	2.8	196.0	184.4	11.6	14.4
1974 [1]	319.9	296.5	23.4	220.5	206.0	14.5	37.9
1973: I	253.8	258.9	−5.1	191.7	177.0	14.7	9.6
II	261.2	261.2	−.1	194.0	181.7	12.3	12.2
III	270.2	262.5	7.7	197.4	186.2	11.2	18.9
IV	278.3	269.7	8.6	200.8	192.7	8.1	16.7
1974: I	296.1	279.4	16.6	208.3	197.4	10.9	27.5
II	312.9	290.1	22.9	215.9	203.3	12.6	35.5
III	333.0	302.6	30.4	224.2	208.8	15.4	45.8

[1] Preliminary.
[2] The net increase in overwithholding of personal income taxes is not included in full-employment receipts.

Note.—Detail may not add to totals because of rounding.

Sources: Department of Commerce (Bureau of Economic Analysis), Office of Management and Budget, and Council of Economic Advisers.

by 1974 they had fallen to less than 40 percent. Transfer payments to persons have a smaller impact on aggregate demand than purchases because not all of the transfer payments are spent by the recipients. Thus the aggregate demand resulting from a given total of Federal expenditures is less if these expenditures are weighted increasingly toward transfer payments. While the previous adjustments would make the shift in the Federal full-employment budget surplus considerably smaller than shown in Table 15, this adjustment would work in the opposite direction by showing less growth in the weighted than in the unweighted expenditures.

THE STATE AND LOCAL AND THE COMBINED BUDGET BALANCES

In fiscal 1973, State and local governments registered a surplus of $12 billion (NIA basis), while the Federal Government had a deficit of $15 billion. The advent of general revenue sharing and the rapid growth of the economy may have boosted the State and local government surpluses temporarily during this time. As expenditures accelerated subsequently, State and local surpluses declined from a record $19 billion in the fourth quarter of 1972—the first quarter in which a general revenue sharing payment was made—to $2 billion in the second and third quarters of 1974. The surplus of less than $2 billion registered for calendar 1974 was far from sufficient to meet the actuarial funding obligations imposed on pension plans for the employees of State and local governments. Since the surplus of the social insurance funds approached $10 billion, other State and local funds had a deficit of $8 billion.

Budgetary reserves are now so tight that the rise in State and local expenditures will have to slow considerably to adjust to the reduced growth of receipts, or taxes will have to be raised in a declining economy. The full-employment surplus of State and local governments that held fairly steady in 1973 and in the first half of 1974 is thus expected to rise sharply in 1975.

While inflation has caused a disproportionate rise in Federal receipts, State and local government receipts have grown little if any in real terms. Though the relative importance of indirect business tax and nontax accruals is falling rapidly, such receipts still account for more than 50 percent of total receipts of State and local governments. These taxes have barely kept up with inflation. Losses in receipts from the lag in property tax assessments and collections rise with the rate of inflation, and items whose prices have risen disproportionately in recent years, such as food, are frequently exempt from sales taxation. Finally, the yield of *ad rem* taxes, which are levied, for instance, in the form of a given number of cents per gallon of gasoline or spirits, is invariant to inflation by definition, unless the tax laws are changed.

At all levels of government combined, fiscal activity has become significantly less expansionary since the end of 1972. In 1972 the increase in the full-employment surplus of State and local governments offset much of the

expansionary thrust of Federal fiscal policies. This surplus then changed little from the second quarter of 1973 to the second quarter of 1974. It did not begin to reinforce the increasing thrust of Federal fiscal policy toward restraint until the second half of 1974.

MONEY AND CREDIT

Inflation and recession were reflected in the money and credit markets last year. As the year began, interest rates were declining from the peaks reached in the summer of 1973. The decline continued until March, and then most interest rates rose steadily until August, when they began to decline again. Interest rates typically decline in the early stages of recession. What was not typical was that even after declining, interest rates remained high, probably because of the persistent anticipation of high rates of inflation.

Stock prices also fell in 1974. By the end of the year, stock price indexes stood well below the lowest point reached during the 1970 recession. There exists no dependable theory of stock market prices. Yet last year's trend in the market probably had to do with the high level of interest rates as well as with a profits record that has been poor for some time, if adjustments are made for specific components of book profits that reflect merely the inflationary revaluation of inventories and of fixed capital consumption.

Mortgage-lending thrift institutions suffered a contraction in deposits as depositors shifted to higher-yielding assets, particularly during the summer months. By late in the year, however, deposits were again flowing into thrift institutions as market rates of interest fell relative to rates paid on deposits. Until late in the year commercial banks faced rapidly growing loan demands that led them to borrow heavily from the Federal Reserve at times and to keep their reserve holdings close to the legal minimum. The ability of banks to expand deposits further or to absorb drains of reserves was impaired. Along with a number of other factors this liquidity squeeze contributed to a few bank failures both here and abroad.

MONETARY AGGREGATES

The goals of monetary policy underwent several important changes during 1974. The aim of Federal Reserve operations, at least until late in the year, was to moderate further the growth rates of the monetary aggregates in order to slow both the expansion of total spending in the economy and the rapid rise in bank credit. Growth rates in monetary aggregates and in total spending tend to move in similar patterns, and the underlying policy objective was to provide monetary and financial conditions that would be consistent with an abatement of inflationary pressures. Because of the uncertainties associated with the economic effects of the oil embargo, monetary policy actions in late 1973 and early 1974 were allowed to depart temporarily from the longer-term monetary objectives. During the second and third quarters of the year, as the economy was recovering from the initial impact of the embargo, the Federal Reserve acted to bring down the growth rates of the

aggregates, so that they would be more in keeping with the longer-term targets. By October, however, the signs of weakness developing in the economy began to prompt a return to a slightly more expansive set of monetary actions. These actions, including reductions of legal reserve requirements, first led to a reduction of the outstanding borrowings of the commercial banks from the Federal Reserve but are expected to show soon in the monetary aggregates.

For the year as a whole the growth of the monetary aggregates decelerated significantly, as is indicated in Table 16. From the fourth quarter of 1973 to the fourth quarter of 1974, monetary aggregates, as measured by either M_1, M_2, or M_3 grew at rates that were 1 to 2 percentage points lower than the rates of the preceding year. The acceleration in prices last year meant a somewhat more pronounced effect than is indicated by the numerical size of the monetary deceleration. Real balances declined as a result of a monetary policy that was unwilling to accommodate economic expansion until the steepness of the price trend was reduced.

The policy of monetary restraint did cause strains in credit markets. Yet even if monetary policy had been such as to permit rapid inflation, large strains would have developed. If lenders fear long-lasting steep inflation they insist on interest rates that rise steeply with the maturity of the loan, but given the uncertainties of the outlook, such terms entail large risks for the borrower.

Monetary policy actions are the major determinant of growth in monetary aggregates. One measure of monetary policy is the rate at which the Federal Reserve System adjusts member bank reserves available to support private deposits. A more comprehensive measure of policy actions, the adjusted monetary base (defined in footnote 1 to Table 16) has served as a guide to the effects of policy actions on monetary aggregates in recent years. Money growth rates sometimes diverge from growth rates in these measures of monetary policy, but money does tend to grow rapidly when reserves and base money grow rapidly. This is true, as is the inverse, even for short periods such as from the first to the second half of 1974.

Several developments beyond the control of policy makers affected growth rates in monetary aggregates during 1974. One such factor was the remarkable growth in large negotiable certificates of deposit (CD's) issued by banks—42 percent from December 1973 to December 1974. Banks are permitted to pay competitive interest rates on these deposits, and they were induced to do so last year by the strong demand for bank loans. Although large certificates of deposit are not included in M_1, M_2, or M_3, reserves that the banks must hold against them do reduce the amount of reserves available to support deposits that are included in measures of the money stock. Thus, given the rate of expansion in bank reserves, the rapid growth in CD's led to slower growth in M_1, M_2, and M_3.

The public also increased its holdings of currency relative to its holdings of demand deposits and total deposits during 1974, a shift that reduced

TABLE 16.—*Measures of monetary growth and monetary policy, 1972–74*

[Percent; seasonally adjusted annual rates]

Period	Measures of monetary growth			Measures of monetary policy	
	M_1	M_2	M_3	Adjusted member bank reserves available to support private deposits [1]	Adjusted monetary base [2]
	Demand deposits plus currency	M_1 plus time deposits other than large CD's	M_2 plus deposits at nonbank thrift institutions		
Change from corresponding period a year earlier:					
1972: IV	7.7	10.9	12.9	9.1	8.0
1973: IV	6.3	8.9	8.9	9.4	7.6
1974: IV [3]	5.1	7.8	7.0	9.1	8.4
Change from preceding quarter:					
1974: I	5.9	9.9	9.4	5.3	8.6
II	7.4	8.5	7.5	16.1	9.1
III	3.6	6.4	5.3	12.7	5.4
IV [3]	3.5	6.6	6.0	2.7	10.4

[1] Adjusted by Federal Reserve Board to reflect the effects on available reserves of changes in required reserve ratios.
[2] "Adjusted monetary base" is member bank reserves plus currency held by the public and by nonmember banks, adjusted for reserve requirement changes and shifts in deposits.
[3] Preliminary.

Sources: Board of Governors of the Federal Reserve System and Federal Reserve Bank of St. Louis.

the growth rates of M_1, M_2, and M_3. While currency grew at a 9.9 percent rate from December 1973 to December 1974, demand deposits grew at only 2.9 percent, and total deposits—excluding large CD's—at 7.3 percent. Currency tends to grow faster than demand deposits when interest rates rise, because demand for currency is less interest-elastic than the demand for demand deposits.

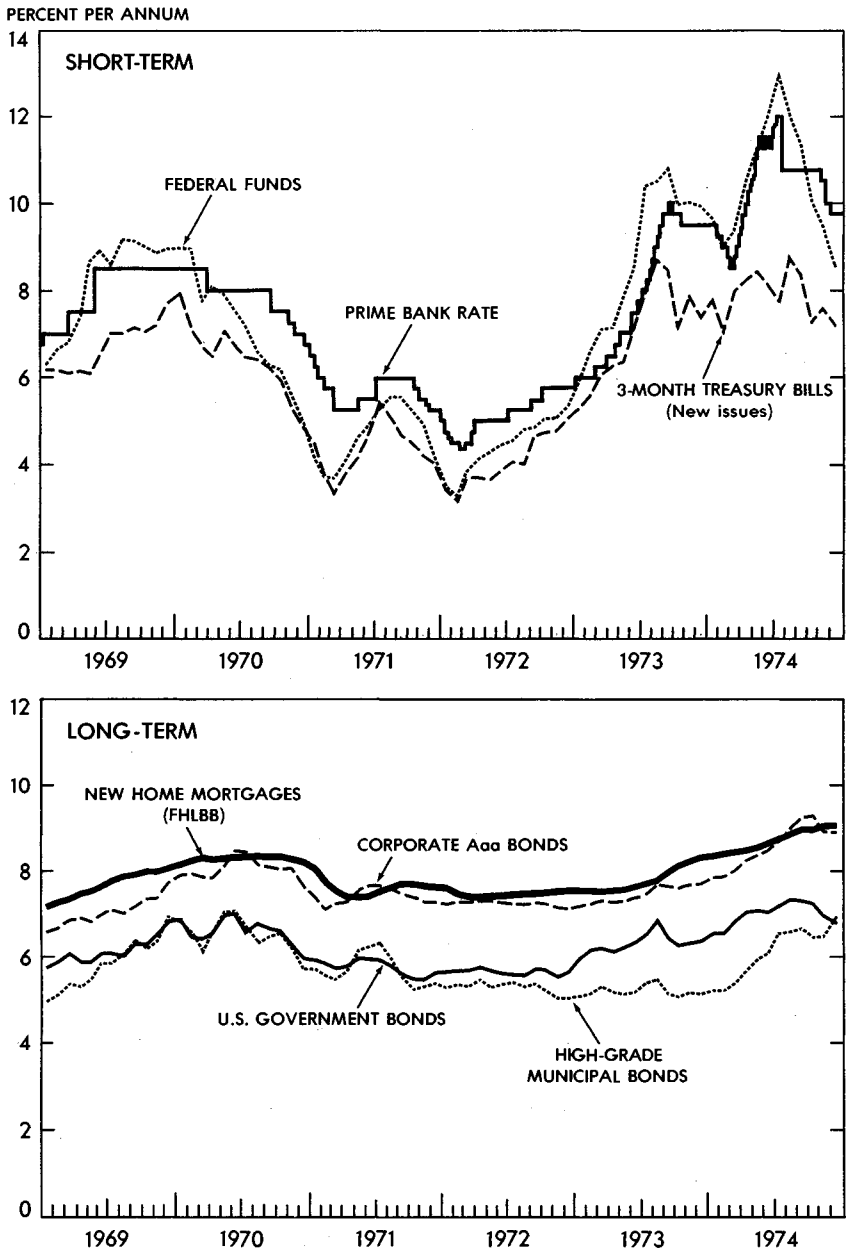
Concurrently, the public increased its holdings of time and savings deposits relative to demand deposits. The rise in interest rates paid on time and savings accounts relative to the zero legal rate paid on demand deposits probably played a large role in this development. The smaller required reserve ratios on time and savings deposits permitted banks to increase the stock of these deposits much more than they curtailed the stock of demand deposits. The result was that M_2 and M_3, which include time and savings deposits other than large CD's, grew much faster than M_1, which does not.

INTEREST RATES

Interest rates on most of the debt instruments included in Chart 5 rose in 1974 to the highest levels ever recorded in the United States. Inflation and, more importantly, the expectation of continuing rapid inflation were major factors underlying these high interest rates. When lenders of money expect prices to rise, they demand an inflation premium—a higher rate of interest—to protect the real value of their loans. Borrowers, also expecting higher prices and incomes, are willing to pay interest rates that would force them out of the market in periods of stable prices.

Chart 5

Interest Rates



SOURCES: DEPARTMENT OF THE TREASURY, BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM, FEDERAL HOME LOAN BANK BOARD, MOODY'S INVESTORS SERVICE, AND STANDARD & POOR'S CORPORATION.

Although interest rates reached unprecedented heights in 1974, they generally remained well below the rate of inflation. For instance, 3-month Treasury bill rates averaged well below 9 percent for 1974, while prices rose an average of more than 10 percent. The real rate of interest on bills was thus negative, and those who held bills through the year transferred real wealth to the borrower, the U.S. Treasury in this case. Although similar transfers occurred throughout the financial markets, the largest were probably transfers from owners of ordinary deposits in thrift institutions to some of the mortgage holders who borrow from these institutions.

Legal interest rate ceilings for deposits of banks and thrift institutions (regulation Q) placed these institutions at a competitive disadvantage, particularly during the summer and early autumn months when market interest rates were highest. Commercial banks were generally more successful than thrift institutions in paying competitive interest rates to their depositors, mainly by issuing large certificates of deposit on which they legally could pay a competitive rate of interest. These deposits, as noted earlier, grew very rapidly during 1974. Thrift institutions issued similar instruments on a much smaller scale. Since their portfolios contained a large proportion of old mortgages yielding low-interest returns, they were less able than banks to compete for funds by paying higher interest rates to depositors. Some banks also attracted funds by issuing variable interest rate bonds through their holding company affiliates. Legislation passed in October enables the Federal Reserve Board and the Federal Deposit Insurance Corporation (FDIC) to apply regulation Q to obligations issued by all federally insured depository institutions, but neither the Federal Reserve Board nor the FDIC has yet adopted regulations in this regard.

CREDIT MARKETS

Transactions in U.S. credit market in 1974 reflected the rapidly changing economic climate. The nominal value of net new funds raised in 1974 (annual rate for first 3 quarters) increased to $194 billion from the $187-billion rate of 1973. The proportions of funds raised by categories of borrowers also changed. As shown in Table 17, corporations and foreigners increased their shares of total borrowings in 1974 while other borrowers, notably governments at all levels and households, decreased theirs.

The increase in corporate borrowing reflected a more rapid increase in requirements to finance fixed capital investment and inventories than in internal funds available for such expenditures. Nearly all of the large rise in profits from 1973 to the first 3 quarters of 1974 was in the form of inventory profits and was not available for new fixed capital investment.

The increase in corporate borrowing was concentrated in the short-term markets. The strained liquidity of the banking system caused a sharp slowdown in the expansion of business borrowing from the banking system, and a large increase in business borrowing through the commercial paper market. Total corporate borrowings from longer-term capital markets rose slightly

TABLE 17.—*Net funds raised in U.S. capital markets by nonfinancial sectors, 1968–74*

Period	Total	U.S. Government	State and local government	Households	Farm and nonfarm noncorporate business	Corporate business [1]	Foreign [1]	Federally sponsored credit agencies [2]
	Billions of dollars; seasonally adjusted annual rates							
1968–73 average	131.7	12.5	12.7	43.5	12.3	46.5	4.3	8.4
1973	187.4	9.7	12.3	72.8	17.9	67.2	7.5	19.6
1974: average of 3 quarters [3]	194.3	8.6	14.5	54.2	15.5	84.1	17.5	18.3
I	177.3	8.7	14.5	51.4	10.7	78.0	14.1	9.3
II	206.5	2.1	17.4	53.6	18.7	89.7	25.1	24.3
III [3]	199.1	15.1	11.5	57.6	17.0	84.6	13.3	21.2
	Percent of total							
1968–73 average	100.0	9.5	9.6	33.0	9.3	35.3	3.3	6.4
1973	100.0	5.2	6.6	38.8	9.6	35.9	4.0	10.5
1974: average of 3 quarters [3]	100.0	4.4	7.5	27.9	8.0	43.3	9.0	9.4
I	100.0	4.9	8.2	29.0	6.0	44.0	8.0	5.2
II	100.0	1.0	8.4	26.0	9.1	43.4	12.2	11.8
III [3]	100.0	7.6	5.8	28.9	8.5	42.5	6.7	10.6

[1] Includes equity issues.

[2] Not included in total since these agencies function as financial intermediaries between borrowers and lenders, and are not final borrowers.

Includes issues of the Federal Home Loan Banks (FHLB), Federal Home Loan Mortgage Corporation (FHLMC), Federal Intermediate Credit Banks, Federal Land Banks, Federal National Mortgage Association (FNMA), and the guaranteed securities (backed by mortgage pools) of the Government National Mortgage Association (GNMA).

[3] Preliminary.

Note.—Detail may not add to totals because of rounding.

Sources: Board of Governors of the Federal Reserve System, FHLB, FHLMC, and GNMA.

as a significant increase in corporate bond issues was only partly offset by a decline in both corporate mortgage and equity financing.

The substantial increase in foreign debt raised in the credit markets in 1974 was related to two factors. The first was the use of U.S. banks as intermediaries in channeling funds from the Organization of Petroleum Exporting Countries (OPEC) to the oil-importing nations. The second factor was the removal in January 1974 of several regulations by the United States, including the Interest Equalization Tax and the Federal Reserve Voluntary Foreign Credit Restraint Program, which had been designed to discourage or restrict foreigners from raising funds in U.S. capital markets.

To the extent that increased foreign borrowing represents a "recycling" of oil money, foreign participation in U.S. credit markets is likely to remain high and will probably increase, at least for some time, beyond the level reached during the first 3 quarters of 1974. To the extent that this increase represents the effect of eliminating controls on foreign lending, foreign participation is likely to remain above the levels prevailing when controls were in force. Activity is likely to decline from its current high

levels, however, as the portfolio adjustment part of the increase stemming from the removal of the controls is dissipated.

ASSISTANCE TO THE MORTGAGE MARKET

In response to the deteriorating conditions in the housing industry, the Federal Government has provided substantially increased assistance to the mortgage market through its sponsored credit agencies. Typically these agencies increase liquidity in the mortgage market by providing advances to, and purchasing mortgages from, mortgage lenders. They do this with funds raised either by issuing debt instruments or by selling interests in pools of mortgages they have purchased. As a result of these activities, thrift institutions and other mortgage lenders obtain funds at federally subsidized interest rates and thus are able to make additional mortgage loans.

Prior to 1973, net mortgage purchases by the federally sponsored credit agencies had never amounted to more than $6.5 billion in any one year. In 1973 net purchases were $10 billion, and it is estimated that mortgage purchases of $15 billion or more were made by these agencies in 1974. Part of the substantial increase in 1974 is attributable to special programs authorized during the year for the purchase of up to $16 billion in residential mortgages, primarily on new homes, at interest rates below the market. Under the so-called Tandem Plan the Government National Mortgage Association (GNMA) was twice authorized to purchase FHA/VA home mortgages—200,000 units valued up to $6.6 billion on January 21 and 100,000 units valued up to $3.3 billion on May 10. Under the January 21 program commitments amounting to $4.8 billion were made for 200,000 units. On May 10 the Federal Home Loan Mortgage Corporation (FHLMC) was authorized to purchase $3 billion of conventional mortgages from the member institutions of the Federal Home Loan Bank system. On October 18 purchases of $3 billion in conventional mortgages were authorized under the auspices of a new GNMA Tandem-type plan that utilizes the services of FNMA and FHLMC.

By the end of 1974 commitments to purchase roughly $10½ billion in mortgages had been made under these programs, while $3½ billion remained to be committed. Of the $10½ billion, purchases amounting to over $4 billion had actually been made.

In 1974, the Federal Home Loan Banks (FHLB) provided assistance to the mortgage market by making net advances of $6.5 billion to savings and loan associations. Included in this total is nearly the full amount of $4 billion in internally subsidized advances authorized on May 10. These advances, while substantial, were down slightly from the record $7 billion in net advances made during 1973. Several times during 1974 the Federal Home Loan Bank Board also lowered the required liquid asset ratio for its member thrift institutions, freeing additional funds for mortgage investment.

The maximum allowable interest rate on Veterans' Administration (VA) and Federal Housing Administration (FHA) guaranteed mortgages was

increased administratively in several steps after January 21, 1974, from 8¼ percent to 9½ percent, in response to rising market interest rates. It was then lowered to the 9 percent rate permitted at the end of the year, as market rates declined. Maximum loan ceilings and coverage rates for VA and FHA guaranteed mortgages were also raised by the Housing and Community Development Act of 1974.

Finally, the Administration has continued to press for passage of the Financial Institutions Act, first introduced in 1973. This act would, among other things, broaden the lending powers of thrift institutions and phase out interest rate ceilings on deposits at commercial banks and thrift institutions.

ENERGY DEVELOPMENTS IN 1974

The oil embargo of October 1973 and the energy price changes which accompanied and followed it helped shape the performance of the economy during 1974. The embargo was over in March, the shortages it created had mostly passed by midyear, but adjustments to higher prices will continue for some time.

In economic terms, the embargo and the accompanying reductions in OPEC output were restrictions of supply which supported the announced price increases for exported oil. The U.S. Government used price controls and a quantitative allocation program at the wholesale level to dampen the price increase. These actions did not necessarily reduce the harmful effects of the embargo, but they did change the form in which those effects were imposed on the public. Instead of paying still higher prices for oil, consumers suffered inconvenience and uncertainty in obtaining supplies and paid higher prices for substitutes. As a whole, the Nation used available fuel supplies less efficiently and thus obtained less benefit from them because price controls and allocation were imposed. Because of these actions the United States may have experienced less inflation and probably achieved lower unemployment than would otherwise have occurred. Analysis of this period thus requires examination of the change in the cost of energy and its effects on production, consumption, net energy imports, and inventories.

COSTS OF HIGHER ENERGY PRICES

One of the costs incurred because of the large increase in the relative price (including inconvenience and unavailability) of energy was the loss in current output. The higher energy price was transmitted into greater price changes for some products than for others. Sales of the products bearing relatively greater price increases, and of complements to them, declined, causing unemployment and excess capacity in some industries. Some of those unemployed resources could not be transferred easily to the production of less energy-intensive goods, even if demand for those products existed. The more specialized the labor and capital services, the longer the delay before they can adjust to new patterns of demand and production. Some of the highly specialized factors of production thus may have become perma-

nently unemployed because they had no alternative uses. In terms of labor, this unemployment sometimes took the form of destruction of human capital because skills were no longer marketable. The increase in the price of energy also led to a reduction in aggregate demand which, because it was not offset by macroeconomic actions, lowered output as well. Expenditures fell because the income that was transferred abroad as a result of higher oil prices was not fully matched by an increase in foreign demand for goods and services. Additionally, the change in the relative price of energy was so large that it may have disrupted consumption and investment plans and lowered actual expenditures. Given sufficient demand, the loss per unit of time declines as resources gradually adjust, but the loss in accrued output is permanent. When resources are unemployed, net capital formation is depressed along with current consumption. To some degree then, the large increase in the price of imported energy led to some permanent reduction in the potential output of the economy.

Beyond the sharp short-run losses in output, consumption and investment are lowered even when employment rebounds. Resources are diverted to adjusting the economy to patterns of production and consumption that accord with the new relative price of energy. Expansion of energy production, the substitution of capital for energy, and the "premature" replacement of a portion of the capital stock all absorb resources. These adjustments make the shortfall in production less than if the adjustments were not made. However, the added output is at the expense of consumer and alternative investment goods that could otherwise be produced. These adjustments are still in progress, and will continue so long as they lead to fuller and more effective employment of resources. The largest part of the loss in output from this process occurs in the intermediate period when the capital stock is being revised, but to the extent that capital formation is reduced, there is again a permanent loss in the ability of the economy to satisfy wants. The economy is, of course, constantly in the process of adjusting to changed relative prices. The energy episode requires comment only because of the size and suddenness of the change which took place.

The above effects reduce the total output of the economy. In addition, the increase in the bill for imported energy means that the benefit the domestic economy derives from its production is reduced because greater real resources are relinquished to the oil exporters. If oil exporters increase their current imports of goods produced in the United States, this transfer is immediate. To the extent that oil exporters hold dollars in banks or invest in assets (stocks, bonds, certificates of deposit, real estate, and the like) formerly held by U.S. citizens, they secure claims to future output of this economy. Most of the increase in oil revenues of the exporting countries has taken this latter, capital account form in various Western countries.

The shift in the relative price of all energy was initiated by the change in the price of imported oil. The structure of the U.S. energy market is such that the price of the approximately 15 percent of energy imported as oil sets

the unconstrained domestic energy price as well. Average domestic oil and natural gas prices, however, have not been allowed to rise to the price of imported oil and gas. Prices to consumers instead reflect the composite of imported and controlled domestic prices. The result has been that the amount of energy demanded has been larger than it would otherwise have been. Most of the additional energy demanded is supplied by imports of oil. Because of price controls more oil is imported, and it is consumed in producing goods and services of less value than those which must be surrendered to acquire it.

More extensive analysis of the way the change in the price of energy affected the major industrialized countries is found in Chapter 7. At this point, however, examination of the course of energy prices since January 1, 1973, is useful in understanding these and other energy developments during 1974.

PRICES

The recent rise in all energy prices was caused by the increase in the price of imported oil, a result of the increase in payments to oil-exporting governments. The pattern of increase in these payments per barrel is shown by the tax-paid f.o.b. cost of "Saudi Arabian Light," a common reference for world crude oil prices. The tax-paid cost of this oil was approximately $1.10 per barrel in January 1971, $1.55 the following January, and $1.62 in January 1973. The cost rose to $3.15 in October 1973 and to $7.11 in January 1974. Changes in pricing and sales arrangements after the first of 1974 make it difficult to compare current Persian Gulf prices with those of earlier periods. Some inferences may be drawn, however, from the change in the landed cost of crude as reported by the Federal Energy Administration (FEA). The oil from Saudi Arabia that landed in the United States in December 1973 (presumably shipped prior to the embargo) carried an estimated landed cost of $5.49. The estimated comparable cost after the embargo ranged from $11.50 to $12.00. The effect of this pattern of changes as it was carried through to the average refiner acquisition cost of imported crude is shown in Table 18. The percentage of total refinery inputs from foreign and domestic sources is also indicated.

The average refiner acquisition cost of domestic oil was affected also by the price control program. The wellhead price of controlled oil was set at $5.25 throughout 1974, but the price of domestically produced oil was not subject to control if it fitted one of three categories: new, released, or stripper. New oil is the amount produced from a property in excess of the amount produced during the same month of 1972, subject to some adjustments. Released oil is old oil from the same property equal to the amount of new oil produced. Stripper oil is that produced from properties where the average production during the previous month was less than 10 barrels per well per day. The proportion of uncontrolled crude tended to decline during 1974, falling from 40 percent in January to 33 percent in September and 34 percent in October.

TABLE 18.—*Refiner acquisition cost of crude petroleum and percent of imported and domestic crude petroleum in refinery inputs, 1973–74*

Month	Cost (per barrel)			Percent of refinery inputs [1]	
	Composite	Imported	Domestic	Imported	Domestic
1973: September		$4.54		28	72
October		4.91		29	71
November	$5.44	6.49	$5.00	27	73
December	6.54	8.22	5.95	24	76
1974: January	7.46	9.59	6.72	22	78
February	8.57	12.45	7.08	20	80
March	8.68	12.73	7.05	22	78
April	9.13	12.72	7.21	26	74
May	9.44	13.02	7.26	30	70
June	9.45	13.06	7.20	31	69
July	9.30	12.75	7.19	32	68
August	9.17	12.68	7.20	30	69
September	9.13	12.53	7.18	30	70
October	9.22	12.44	7.26	31	69
November [2]	9.41	12.53	7.46	32	68

[1] Stocks are assumed to be in the refinery stream and do not figure in this calculation. The base is the sum of imports and domestic production.
[2] Preliminary.

Sources: Department of the Interior (Bureau of Mines) and Federal Energy Administration.

The rise in the proportion of domestic oil subject to control occurred in part because properties were unable to maintain the production increases over the same month in 1972 that were initially induced by greater demand and the higher oil prices of 1973 and 1974. In time, as new oil discoveries come into production, uncontrolled oil will rise as a proportion of the total. Meanwhile the controls system explains the pattern in the cost of acquiring domestic oil reported in Table 18. The price of uncontrolled oil did not rise fast enough to offset all of the decline in its part of the total. This price ranged between a low of $9.82 and a high of $9.98 during the first 8 months of 1974. It rose rapidly in the next 3 months, however, reaching $10.83 in November.

The price of coal, which is not controlled, rose rapidly during 1974. It was pulled upward by the increase in the price of its major substitute, residual fuel oil. The price of residual fuel oil is not controlled because most of it is imported. The price of the other major fuel, natural gas, also increased, but not as much as that of petroleum or coal. Because most natural gas is sold under long-term contracts, its average price is slow to respond to an increase in demand. Federal controls on the price of gas sold for interstate resale restricted the price change still further. Because of price control provisions that permit only the pass-through of costs, the price of refined petroleum products rose approximately with the cost of crude oil to refineries. Electric power prices responded largely to increases in the cost of fuel inputs. Table 19 shows that there were substantial increases only in coal prices from 1964 to 1972. Prices rose fastest for refined petroleum products in the last quarter of 1973 and the first quarter of 1974. The bulge in coal prices occurred 2 quarters later. Natural gas prices have risen less than those of the other two primary fuels.

TABLE 19.—*Changes in wholesale prices of selected fuels, 1964 to 1974*

[Percent change; quarterly rate]

Period	Coal	Natural gas	Refined petroleum products[1]	Electric power
Average quarterly change:				
1964 to 1969	0.9	0.3	0.5	0.1
1969 to 1972	4.6	1.4	.7	1.5
1972 to 1973	3.0	2.3	5.1	1.7
1973 to 1974	11.1			
Change from 3 months earlier:				
1973: March	.9	3.0	9.5	3.1
June	3.7	3.3	6.0	1.1
September	3.5	1.6	3.2	2.4
December	8.1	7.1	24.2	4.1
1974: March	7.7	3.3	29.7	11.6
June	24.0	3.0	10.9	9.3
September	15.6	12.2	2.0	6.4
December	15.2			

[1] Through February 1973 there were no lags in this series. Since March 1973, index numbers of the major products in this series refer to prices of the previous month. The unlagged portion of the series has a very small weight.

Note.—The price changes shown in this table have been calculated from the wholesale price index, adjusted for the lags embodied in some fuel price series. For example, changes shown in this table from June to September 1973, would be presented in the wholesale price index as changes in natural gas prices from August to November, in refined petroleum products and electric power prices from July to October, and in coal prices from June to September.

Source: Department of Labor, Bureau of Labor Statistics.

The price increases at the wholesale level were carried forward to consumers, though the proportional increases obviously were smaller. Gasoline prices rose 35 percent from September 1973 (before the embargo) to December 1974. The increase for home heating oil was significantly greater—69 percent—primarily because crude oil cost makes up a much larger part of the final price of home heating oil than it does of gasoline. The price of residential gas heating service rose 28 percent and of residential electricity 25 percent over the same September 1973–December 1974 period.

PRODUCTION

The increase in the relative price of energy during the past 2 years and the expectations that preceded it have induced additional investment in energy-producing industries. Still more investment would have been forthcoming had there been greater certainty about government policy here and abroad and if specialized resources had been available. The situation in the petroleum industry, which includes natural gas as well as crude oil, is indicative. Activity takes place in four stages: geological (seismic) exploration and selection of sites, exploratory drilling, development drilling, and production. Table 20 presents data on drilling for the past 6 years and some information on geological activity, which serves as a leading indicator for drilling. The low point for seismic exploration came in 1970 and for drilling in 1971. The increase in drilling in late 1973 and in 1974 was substantial. In addition to the increases in wells actually drilled, still more drilling would have taken place if shortages of equipment and skilled labor had not restrained investment during late 1973 and all of 1974. Very little well-

563-280 O - 75 - 6

TABLE 20.—*Indicators of domestic petroleum industry investment, 1969–74*

Period	Crews engaged in seismic exploration	Exploratory wells	Development wells
Monthly average:			
1969	246	808	1,874
1970	190	641	1,702
1971	221	577	1,577
1972	252	628	1,646
1973	250	622	1,594
1974[1]	300	727	1,924
1974: I		666	1,669
II		679	1,895
III		724	1,936
IV[1]		838	2,194

[1] Preliminary.

Sources: American Petroleum Institute and Society of Exploration Geophysicists.

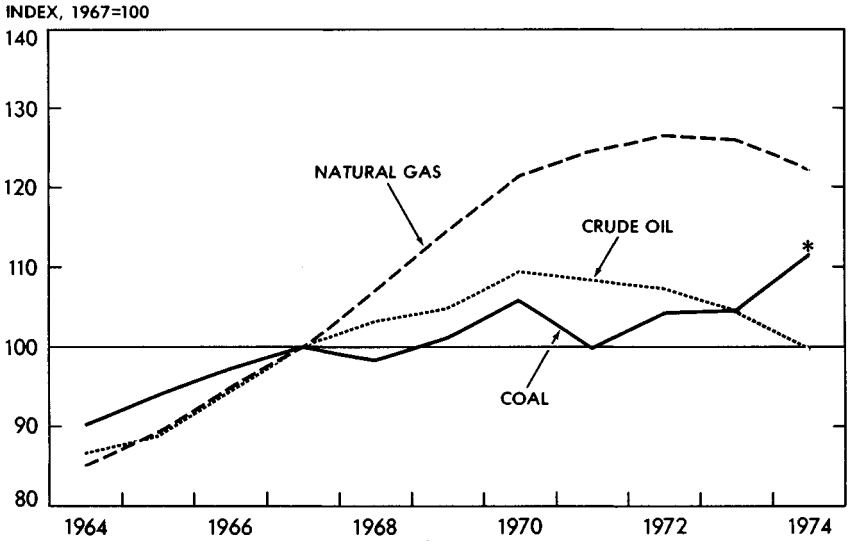
drilling capacity (rotary rigs) was idle for lack of work, but shortages of pipe idled or slowed some rotary rigs and delayed completion of some wells. The backlog of orders for rigs and other oilfield equipment increased during much of this period because production facilities were working at capacity. The equipment shortages in part were the result of the general price control system, that inhibited production and prevented efficient allocation of the material that was available. To some extent they also resulted from the lags inherent in expansion of large, capital-intensive production facilities. The long decline in oilfield activity from its peak in 1956, when 58,000 wells were drilled, to 1971, when a low of only 27,000 wells of all types were completed, left the oilfield equipment industry unprepared to meet the requirements placed upon it.

Investment in the past has not been large enough to prevent the recent decline in crude oil and natural gas output. Crude oil production in 1974 totaled 3.2 billion barrels, nearly 4 percent less than in 1973. Marketed production of natural gas in 1974 is estimated to be 3.3 percent lower than in 1973. Preliminary estimates show a 2.3 percent decline in the production of natural gas liquids from 1973 to 1974. Increased drilling so far has only slowed the rate of decline from what it otherwise would have been. It now appears that domestic petroleum output may stabilize or even rise in 1977 when Alaskan reserves begin to produce, but no turnaround can be expected before then. Natural gas supplies will not be forthcoming from Alaska until the 1980's. Oil and gas production rates at the end of this decade, however, can be strongly influenced by Government policy and by price behavior during 1975 and 1976. The pattern of fuel production since 1963 is shown in Chart 6.

Coal prices rose earlier than the prices of other fuels and on average have risen more, but the increased revenues per ton did not flow through in their entirety to incentives to expand production. In part they were absorbed by increased costs due to the changes in health and safety standards. In addition, when these standards were introduced, production capacity was lost because

Chart 6

Domestic Energy Production



* COAL INDEX FOR 1974 EXCLUDES STRIKE MONTHS OF NOVEMBER AND DECEMBER.

SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM.

some mines could not profitably comply and were abandoned. In part the price increases were also offset by uncertainty due to legislation designed to reduce industrial pollution. Because of this legislation, the anticipated market for high-sulfur coal fell. Potential producers may have anticipated that Federal pollution standards could not be met by coal-burning facilities or that States might impose more stringent controls. Finally, uncertainty about the costs of possible mandated standards for strip mine reclamation discouraged the opening of new mines and induced equipment manufacturers to defer expansion of their production facilities. Despite these factors, the higher prices for coal have elicited expanded capacity and greater output. New mines have opened, and during October, the month prior to the 1974 strike, total output reached a modern peak, the highest output since 1947. Production in 1974 was estimated to be 590 million tons, almost the same as in 1973.

Labor disputes and the unscheduled memorial walkout lasted approximately 7 weeks and resulted in the loss of an estimated 35 million tons of coal production, about 5 to 6 percent of potential. Until the last quarter of 1974 coal production had been running 5.5 percent ahead of 1973. The gain was more than eliminated in the last 3 months when output fell to about four-fifths of the comparable period in 1973. Inventories were somewhat depleted because of the strike, and some export sales were lost, but the strike's disruptive effect was minimal except for the steel and railroad industries. Indus-

trial production losses from the strike were reduced by the planned overhauls which took place in some of the major coal-using industries and by the softening of the economy.

Output from the other major sources of energy—nuclear power plants and hydro stations—was constrained by capacity limitations. Production was not affected during 1974 by changes in the relative price of fossil fuels. The role of hydropower and nuclear power in U.S. energy production remains small.

CONSUMPTION

A combination of increasing relative energy prices (including supply constraints during the embargo), declining economic activity, and voluntary conservation measures caused a drop in energy consumption in 1974 compared to the previous year—the first since 1958. Total annual consumption of energy for the past 10 years and year-to-year rates of increase are shown in Table 21.

TABLE 21.—*Gross consumption of energy by major source, 1965–74*

Year	Total energy consumption		Percent of total energy consumption					
	Amount (quadrillion Btu's)	Percent change [1]	Total	Petroleum	Natural gas	Coal	Hydropower	Nuclear
1965	53.3	4.1	100.0	43.6	30.2	22.3	3.9	0.1
1966	56.4	5.8	100.0	43.2	30.9	22.1	3.7	.1
1967	58.3	3.3	100.0	43.5	31.3	21.0	4.0	.1
1968	61.8	6.0	100.0	43.8	31.7	20.5	3.8	.2
1969	65.0	5.2	100.0	43.8	32.3	19.6	4.1	.2
1970	67.1	3.3	100.0	44.0	32.8	18.9	4.0	.3
1971	68.7	2.3	100.0	44.5	33.2	17.6	4.1	.6
1972	71.9	4.7	100.0	45.8	32.0	17.3	4.1	.8
1973	74.7	3.9	100.0	46.4	30.6	17.9	3.9	1.2
1974 [2]	72.7	−2.7	100.0	46.0	30.1	18.3	4.2	1.4

[1] Based on unrounded data.
[2] Preliminary estimate by Council of Economic Advisers.

Note.—Detail may not add to totals because of rounding.

Source: Department of the Interior, Bureau of Mines (except as noted).

The use of primary energy for the production of electric power was significantly depressed. The consumption of electric power historically has risen at a rate of about 7 percent per year. In 1974, however, there was no increase at all over 1973. This absence of usual growth occurred despite the fact that some of the fuel price increases have yet to flow through to electric utility rates.

The consumption of coal was about the same in 1974 as in 1973, despite the fact that energy use in aggregate declined. Coal use in electric utilities was increased by 5 to 6 million tons, roughly 1 percent, through special efforts to convert facilities from oil to coal and through more intense use of coal generating plants. In addition to the oil shortage, the gap between the

cost of oil used by electric generating stations and the cost of coal widened, increasing the incentive to use coal. Nevertheless there have been generally adequate supplies of coal for electric generation. The major market for coal has been steam electric plants, and air quality controls have made the economic use of much additional steam coal impractical or impossible in existing facilities.

The consumption of oil, on the other hand, was restricted by lack of supply during the embargo and by lack of markets afterward. The allocation policies in force during the embargo required reductions in consumption, first to maintain and then to increase inventories. Some of the reduction in oil usage was later made up; most was not. Other fuel developments, especially the growing shortages of natural gas, increased the quantity of petroleum consumed. In late 1974, when oil was freely available, more petroleum and petroleum products were used directly and for generating electricity than would have been used had natural gas been available. Despite these stimuli to demand, total consumption of petroleum fell during 1974, reflecting both its increased price and the economy-wide decline in output. One major source of this decline was in motor vehicle fuel use. Gasoline consumption fell by about 2 percent as miles traveled on highways declined by approximately 3 percent, the first year-to-year decline since World War II. The drop in fuel consumption and miles driven occurred despite the fact that there were 5.3 million more registered vehicles in 1974 than in 1973.

The pattern of consumption of energy by source over the past 10 years is shown in Table 21. The striking shift evident there is in the role of natural gas. After years of rapid growth, natural gas has been losing its market share since 1971. The shift against natural gas has been caused by lack of supply, not by a change in consumer preference or price. The relative price of gas, already lower than other fuels on an energy-contained basis because of regulation, fell even further against its competitors during 1974. As a consequence, the amount demanded, shortages, and nonmarket allocation all reached higher levels in the gas industry in 1974 than before. The natural gas situation is discussed below.

IMPORTS AND EXPORTS

The United States, a net importer of petroleum and natural gas and an exporter of coal, has been a net importer of energy for two decades. For a decade and a half petroleum imports were restricted to protect domestic oil producers against low-priced foreign oil. Since May 1973, however, no quantitative restrictions have been in force. High-priced foreign petroleum now supplements domestic supplies and fills the gap between energy demand and domestic energy supply. For this reason, increases in U.S. energy production (except for coal) relative to energy consumption lead directly to reductions in oil imports. Gross imports of petroleum and petroleum products rose from about 21 percent of consumption in 1965 to 36 percent in both 1973 and 1974. In absolute terms, imports in 1974 fell to 6.0 million barrels a day, 3 percent below 1973.

Coal is the only fuel the United States now exports on balance, with shipments of from 10 to 12 percent the size of the domestic market. Metallurgical coal has found large and expanding markets abroad. Steam coal has moved into foreign markets to some degree, and development of lower-sulfur western mines may increase this trend. Exports of coal have not interfered with the meeting of energy demand through domestic supplies, though the external market has raised the price of coal inputs for both steam and metallurgical coal uses.

Natural gas is imported by pipeline and in minor amounts in liquefied form. The primary source of pipeline imports is Canada; small quantities are exported to Mexico and in a liquefied form from Cook Inlet, Alaska, to Japan. The imports from Canada have played an important role in the energy supply of some regions. According to some interpretations of recent Canadian policy announcements, however, those imports (as well as imports of oil from that nation) may be restricted in the future unless substantial discoveries of new Canadian reserves are made. Already pipeline companies have been required to accept sharply higher prices as of the first of 1975 or face supply cutoffs at the end of 1976. The restriction of gas exports would create serious problems for West Coast consumers, just as restriction of Canadian oil exports will harm the "Northern Tier" refiners of the Midwest.

INVENTORIES

The disruption in the petroleum supply in 1973–74 and the coal strike of 1974 made it clear how important adequate fuel inventories are to the continued smooth functioning of the economy. The adequacy of inventories is partly a function of the consumption rate. More importantly it is a function of the probability of unpredictable variations in consumption or in the rate at which supplies are made available. End-of-month primary inventories for the past 3 years, as measured by the number of days' consumption they represent, are shown for crude oil and important petroleum products in Table 22. These data indicate that inventories measured in this way did not decline during 1974 even though the embargo lowered total oil supplies. The regulations imposed by Government, voluntary conservation, a warmer than normal winter, and the expectation of even higher prices in the future contributed to maintaining inventories at pre-embargo levels. A drawdown of inventories would have reduced the actual cost of the embargo to the economy. However, it would also have increased the vulnerability of the United States to a further tightening of the embargo, a sudden deterioration in the weather, or an embargo which persisted beyond the actual termination point of the 1973–74 episode.

Both crude oil and product stocks approached new highs for the season as 1974 drew to a close. If inventories retain their current relation to consumption, an embargo during early 1975 would find the United States better prepared than it was in October 1973. Unfortunately, these inventories may be drawn down for commercial reasons. A change in price

TABLE 22.—*Petroleum inventories expressed as days of consumption, 1972–74*

[Days]

Month	Crude[1]	Gasoline	Distillate	Residual
March:				
1972	21.6	37.0	29.2	19.2
1973	18.9	31.9	33.6	14.6
1974	20.4	35.8	41.0	18.8
June:				
1972	21.8	29.4	58.7	25.6
1973	18.3	29.9	57.1	19.9
1974	19.9	32.9	77.2	31.5
September:				
1972	19.6	31.0	86.3	28.5
1973	18.2	32.0	71.5	20.7
1974	20.4	34.5	91.8	30.1
December:				
1972	19.2	33.4	36.5	17.5
1973	18.9	33.7	53.3	18.4
1974[2]	19.6	34.7	59.9	25.7
Months of oil embargo:				
1973: October	18.3	32.1	69.6	21.6
November	19.2	30.4	57.1	16.7
December	18.9	33.7	53.3	18.4
1974: January	19.2	37.5	47.4	15.3
February	20.5	35.9	38.9	15.0
March	20.4	35.8	41.0	18.8
April	20.6	34.7	44.1	21.1

[1] Crude stocks divided by average daily runs to stills.
[2] Preliminary.

Sources: Department of the Interior (Bureau of Mines) and Federal Energy Administration.

expectations or in world oil market conditions may bring a rapid deterioration of the national petroleum inventory position. The threat of disrupted supplies does not by itself guarantee retention of "excess" inventories by commercial firms. Even though firms might expect a disruption, there is no incentive for them to maintain expensive inventories to be used in that event so long as they expect Government allocation and price controls to deny them the inventory profits that might be earned. Consequently, although inventories are now high, they cannot be considered secure.

Coal inventories were depleted during the coal strike but not dangerously so. By year-end, inventories were being rebuilt at a satisfactory rate. The other fuels are not subject to inventory or else, like natural gas, inventories are limited to working stocks and some supplies for seasonal balance.

NATURAL GAS: A SPECIAL CASE

The only fuel in seriously short supply at the end of 1974 was natural gas. The shortage of natural gas became more severe during 1974 and is likely to get still worse in 1975. The shortage is taking the form of curtailments of deliveries under existing contracts and of failure among potential consumers to obtain supplies at the going price.

The shortage of natural gas exists because the price of gas has been held below the market-clearing level by Federal Power Commission (FPC) regulations. The FPC is required by statute to regulate the wellhead price of natural gas sold for resale in interstate commerce. It controls the price of

approximately 60 percent of the gas produced in the United States. The average price paid by interstate pipeline companies for regulated gas was 27 cents per thousand cubic feet in October 1974. That price was clearly below the market-clearing level, as indicated by the higher price of gas sold under unregulated conditions (though that price too is held down indirectly by regulation), and by the price of natural gas substitutes.

The price of natural gas was below the price of its substitutes prior to the energy price escalation of 1973, and the differential increased markedly during the succeeding period. A rough measure of the price differential is seen in the price difference in terms of energy content of coal, oil, and gas in electric power plant use (Table 23). These data are the more striking because gas requires no on-site storage and burns more cleanly than other fuels. Buyers would be willing to pay a slight premium for gas if it were available. Instead, as shown in the table, the average price of gas is below the price of both coal and oil.

TABLE 23.—*Average price paid by utilities for major fuels, 1972–74*

[Cents per million Btu's]

Period	Coal	Oil	Gas
1972: III	37.0	57.7	----
IV	37.3	61.0	30.3
1973: I	38.7	66.2	31.2
II	39.6	70.5	33.6
III	40.1	77.4	34.2
1973: October	41.9	88.9	35.5
November	44.0	104.0	35.7
December	45.5	121.1	36.3
1974: January	51.4	162.7	37.3
February	56.9	187.3	39.8
March	60.8	189.1	42.5
April	64.0	187.2	43.6
May	65.8	187.9	44.0
June	69.5	195.1	47.9
July	72.9	196.4	49.8
August	77.3	196.2	51.8
September	79.1	195.4	52.4

Source: Federal Power Commission.

Because consumers were increasingly unable to obtain all the gas they would have liked at the regulated price, nonprice rationing of natural gas increased during 1974. Precise estimates of the quantity of gas which would have been consumed if supply had been forthcoming are not available. Recorded shortfalls of contractually obligatory sales amounted to about 9.6 percent of the volume called for during September 1973–August 1974. These curtailments are expected to reach about 16 percent during the like 1974–75 period. The sales forgone under contractually "interruptible" contracts were approximately 38 percent of the contract volumes during the September-August period of 1973–74 and are expected to reach 58 percent in the same 1974–75 period. Because of the priority allocation system adopted by the Federal Power Commission most of these shortages are borne by industrial consumers, including electric utilities.

The effect of regulating the price of natural gas has been to increase the demand for its substitutes, especially imported oil. The reasons are twofold: First, the quantity of natural gas consumed by those who have preferential access to it has been increased, leaving less for other consumers. Those thus denied gas by regulation consequently consume more oil than they otherwise would. Second, the lower price for natural gas has caused less of it to be produced. Because imported oil makes up the difference between the demand for and the domestic supply of energy, the gas shortfall during 1974 was made up partially through greater consumption of higher-priced oil.

CHAPTER 3

Unemployment

THE EMPLOYMENT ACT OF 1946, which created the Council of Economic Advisers, set forth the goal of maintaining "maximum employment." The extent to which this objective is achieved is usually measured by the unemployment rate, which has come to serve as a measure of the extent of resource underutilization in the economy. For many it is also a measure of economic and social hardship.

We are starting 1975 with the highest unemployment rate since 1958. The story of the deterioration in the economy during 1974 and its effects on the labor market is given in Chapter 2. This chapter examines the various types of unemployment and unemployment rates at different points in time and among demographic groups. It also looks at the welfare implications of unemployment, and at Government measures to ameliorate the difficulties caused by unemployment.

It is important to emphasize, because the point is often misunderstood, that to analyze unemployment is not to provide excuses for it or deny the personal and social problems associated with it. The unemployment of persons who seek work is costly to the workers themselves, their families, and the Nation as a whole. Our goal should be to reduce unemployment whenever this can be done by means which are not more costly than the unemployment itself. It is therefore important to understand the different kinds of unemployment so that the effectiveness of alternative Government policies can be properly evaluated. This chapter is intended to be a guide to the formulation of constructive policies toward unemployment over the long run.

Unemployment is not as simple a concept as is often believed. The meaning of any particular unemployment rate depends on the way unemployment is defined and measured, and on the sources and composition of the unemployment. Although it is generally clear when we are at points of very high unemployment and widespread underutilization of productive capacity, it is much more difficult to determine when we are at "maximum employment." The unemployment rate of 7.2 percent reached in December 1974 clearly represents a substantial departure from maximum employment. At the other extreme, under current definitions, a zero rate of unemployment is impossible to attain, and efforts to do so would have undesirable consequences. Although the period following World War II was one of rapid

economic growth and rising levels of real income, the unemployment rate averaged 4.7 percent from 1947 through 1973. Only during World War II (1944), when 17 percent of the total labor force were in the Armed Forces, did the rate ever fall close to 1 percent. An understanding of the issues related to unemployment is needed to determine the extent to which a particular rate is too high, or when the goal of maximum employment is attained.

DEFINITION AND MEASUREMENT OF UNEMPLOYMENT

The major source of information on unemployment is a monthly Government survey of about 47,000 households, the Current Population Survey or CPS. The survey includes detailed questions about the labor force status of household members aged 16 and over, with the object of identifying those who are employed, unemployed, or out of the labor force.

Persons are classified as employed if during the survey week they did any work as a paid employee or in their own enterprise, or if they worked 15 hours or more as an unpaid employee in a family enterprise. Those temporarily absent from jobs because of labor-management disputes, bad weather, vacation, or illness and other personal reasons are counted as employed, regardless of whether they were paid during the week.

Persons are classified as unemployed if they were not employed during the survey week but were available for work and had made a specific effort to find a job at some time within the preceding 4 weeks, or if they were waiting either to report to a new job within 30 days or to be recalled to a job from which they were laid off.

The civilian labor force is the sum of those who are employed (excluding the Armed Forces) and those who are unemployed. The unemployment rate commonly reported is the number of unemployed persons as a percentage of the civilian labor force.

The unemployment rate is, of course, a function of the specific definitions used and the manner in which the questionnaire is administered. For example, in 1967 it was first stipulated that unemployment should include those seeking work at any time during the preceding 4-week period rather than the previously implied 1-week period. This change in definition is believed to have increased the measured unemployment rate of women, because many women are on the margin between being out of the labor force and unemployed. The unemployment rate may also be affected by the expedient of relying on only one adult member of the household to report for all members. The respondent may not be accurately informed about the jobs held or sought by all household members. There is, for example, some evidence from special surveys that teenagers give a different impression of their unemployment and labor force participation when they respond directly to the survey.

SOURCES AND NATURE OF UNEMPLOYMENT

Unemployment has several aspects that shift in relative importance from time to time. Some portion of unemployment is cyclical; that is, it is associated with the business cycle. Other unemployment is primarily a consequence of frictional, structural, and seasonal factors. These components of unemployment are analytical concepts and are difficult to identify empirically. It is nevertheless important to understand their differing nature.

FRICTIONAL UNEMPLOYMENT

The economy always generates a considerable amount of unemployment resulting from the multiplicity of random events that occur in labor markets. Such unemployment arises partly as a by-product of normal economic change—the closing of some firms, a slowdown in others, the opening and expansion of still others, and changing production techniques within firms. Partly in response to these changes, some workers are laid off and others quit or enter or reenter the labor force. Many become unemployed during this process because the matching of workers to the changing job openings is seldom accomplished instantaneously. Unemployment may also arise as a by-product of personal considerations, quite independent of the fortunes of firms. Thus, events such as the completion of school or of service in the Armed Forces and the lessening of household responsibilities often lead to a movement into the labor force. A preference for a different job environment or geographic area also frequently results in job change, as does an employer's dissatisfaction with a worker's performance.

There is substantial turnover among both the employed and the unemployed. Employment in 1973 averaged 84 million persons per month, but about 100 million different persons worked at some time during the year. Similarly, unemployment averaged 4 million persons per month in 1973, while at least 14 million persons experienced some unemployment in the year. About one-fourth of all those holding jobs in January 1973 had begun their job during the preceding 12 months.

Job loss is usually taken to be an involuntary separation, and quitting a voluntary one. During 1974, 43 percent of the unemployed cited job loss as the immediate reason for unemployment; 15 percent said they had quit their jobs; but 42 percent had just entered or reentered the labor force. In 1973, a year of lower unemployment, the percentage citing job loss was smaller, 39 percent; and the percentage citing quits, or labor force entry or reentry, was greater, 16 percent and 46 percent respectively. Thus, while separation from a job accounts for much unemployment, a similar amount is often the by-product of movement into the labor force.

Entering the labor force usually entails search for a job. Since entrants are by definition not working at a paid job (though they may be fully employed in a real sense as students or housewives), they will usually be counted as unemployed, unless they found a job before becoming technically avail-

able for work. Starting in the 1950's the composition of the labor force began to change as middle-aged married women increased their participation. Since the 1960's the increasing tendency of younger married women to work, and the increase in the teenage labor force because of the post-World War II "baby boom," resulted in rapid increases in the size of the labor force and in the proportion of the labor force comprised of teenagers and married women aged 20 or over (from 20 percent in the labor force in 1950 to 31 percent in 1974). Both groups have relatively high rates of labor force entry and reentry because of school or home responsibilities. As a result, labor force entrants and reentrants have probably accounted for an increasing proportion of the labor force and of the unemployed during the post-World War II period, and hence for a higher level of frictional unemployment. The unemployment of entrants and reentrants, however, is not always entirely frictional. For example, during a recession one sees a cyclical component in the unemployment of entrants and reentrants that is reflected by longer duration.

In a dynamic economy, wage rates, skill requirements, and other job characteristics are constantly changing. As such changes occur, the information about the labor market that people have acquired depreciates in value. Because it takes time to acquire new and useful information, instantaneous job change is seldom feasible. Individuals looking for more rewarding work and firms looking for more productive employees invest time and other resources in the search process. Thus job mobility and the ensuing frictional unemployment are essential consequences of economic change. To the extent that job mobility increases economic efficiency through a better matching of workers and jobs, it helps promote economic growth.

This is not to say, however, that the actual amount of frictional unemployment necessarily equals the optimal amount required to promote efficient economic growth. That is, it is not known whether labor markets in a private enterprise economy will allocate an optimal amount of resources to the dissemination of job information. Periodic surveys in which workers are asked how they located their current job always show that informal sources of information, such as friends and relatives, are more important than such formal sources as private and public employment agencies. Informal networks seem to provide detail about the tangible and intangible characteristics of job vacancies and of job applicants that workers and firms value highly. Because such detail is much less readily obtained through formal channels, it has been difficult for the Government to devise improvements over the existing system.

STRUCTURAL UNEMPLOYMENT

Even during periods of low unemployment, some groups have persistently high unemployment that tends to be of long duration, occurring either in a single spell or in a sequence of spells. Such unemployment is often referred to as structural, in contrast to frictional unemployment, which tends to be of

shorter duration, although there is no hard and fast line between these two classifications.

Structural unemployment represents imperfect labor market adjustment as a result of some barrier to the mobility of resources. For example, the high unemployment in Appalachia during the 1950's and 1960's was initially a consequence of a decline in the demand for coal and of union wages and fringe benefits that were pushed substantially above the competitive level, and thus led to greater mechanization. The resources of the region were not readily adaptable to other industries, and the personal and financial costs of moving to a different area, combined with a chance of obtaining a high-paying job in Appalachia, impeded migration from the region. Since then, the migration out of the region by younger workers, the retirement of older workers, and the improvement of transportation systems which facilitated the development of new industries have dramatically reduced the unemployment rate in Appalachia. As a result, although the unemployment rate in the Appalachian region was 8.6 percent in 1962 compared to the national rate of 5.5 percent, by 1971 it had fallen to 5.9 percent—the same as the national unemployment rate.

The high unemployment rate of teenagers and of workers with little skill may also be partly attributable to structural factors, but of a different sort. In 1974 the unemployment rate of teenagers aged 16 to 19 was 14 percent for white youths and 33 percent for black youths, compared to 3.8 percent for all males aged 20 and over. These higher rates may to some extent result from such artificial barriers to wage rate adjustment as legislated minimum wages; in this sense they can be said to have structural elements. The Federal minimum wage at present is $2.10 per hour for workers covered by the legislation before 1966, and $1.80 per hour for workers who were covered later, mainly some agricultural workers, domestics, and employees of small retail chains. Some employment not covered by the Federal minimum wage is covered by various State and local legislation. In some instances, State and local minimums exceed the Federal level. For example, the current minimum wage in the District of Columbia is $2.50 per hour in some industries. Other legislation adds to the minimum cost of employing a low-wage worker by requiring, for example, employers' expenditures for social security, unemployment insurance, and workers' compensation insurance.

Some adults, but more teenagers, do not have the skills to command a wage that equals or exceeds this minimum cost of employment for other than peak periods of demand in the business of a particular firm. The knowledge that some job openings exist at the minimum wage may encourage some to continue searching, thus adding to the number of unemployed. Others may drop out of the labor force altogether. Since the minimum wage reduces wage differentiation among workers, it will generate a greater decline in employment for the less skilled and for those subject to discrimination in the labor market. These effects explain part of the substantially higher unemployment

rate for teenagers compared to adults and for black teenagers compared to white teenagers. Racial differences in unemployment are discussed in greater detail below.

SEASONAL UNEMPLOYMENT

Seasonal fluctuations in the demand for and supply of labor cause large flows of persons into unemployment. The seasonal nature inherent in some production processes, such as agriculture and construction, and in some consumption—visiting beach resorts in the summer and ski resorts in the winter—can create seasonal fluctuations in employment and unemployment. For example, the unemployment rate of construction workers in February tends to be 133 percent larger than in August. Changes in technology, such as mechanical harvesting equipment and new methods which permit all-weather construction, may have reduced some seasonal fluctuations in employment. Some industries diversify their product lines or use fluctuations in inventories to reduce the costs associated with seasonal variations in demand.

Seasonal fluctuations can also arise on the labor supply side. The unemployment of young people has a strong seasonal component, related mainly to the search for jobs during school vacations. The school calendar was originally designed to fit seasonal demands for young workers in agriculture, but such employment has declined in relative importance.

If the seasonal pattern is regular from year to year, and if data are available for several years, "seasonal factors" can be computed. Indeed, many of the basic monthly unemployment statistics are "seasonally adjusted" by the Bureau of Labor Statistics to show the month-to-month change in unemployment due to factors other than the change in the season. Adjusting the basic data with the standard statistical technique, however, does not remove the impact of seasonality from the average level of unemployment; rather, it spreads the effects of seasonality uniformly throughout the year. Thus, groups with relatively high seasonal unemployment will, on an annual basis, have a relatively high unemployment rate, other things being the same. For example, the higher annual unemployment rates of blue-collar workers compared to white-collar workers, of Alaska compared to the other States, of teenage males compared to adult males, are in part attributable to greater seasonality of employment.

CYCLICAL UNEMPLOYMENT

During a downturn in economic activity the rate of plant closings accelerates and the rate of openings or expansions of firms declines. The rise in unemployment accompanying such a general decline in business activity is referred to as cyclical unemployment and is associated with the underutilization of economic resources, both human and physical. The rise in the unemployment rate from 4.7 percent in the fourth quarter of 1973 to 6.6 percent in the fourth quarter of 1974 is, of course, the most recent example of a cyclical increase in unemployment.

The unemployment resulting from a general business recession differs from unemployment attributable to other causes. As the rate rises during the cycle, there is an increase in the incidence of unemployment, that is, in the proportion of those who are unemployed during some part of the year (Table 24). This increase accounts for only part of the increase in unemployment, however. For example, the unemployment rate in 1971 was 69 percent greater than in 1969; but the incidence of unemployment was only 30 percent greater. The total number of weeks of unemployment experienced during the year by the average unemployed person also increases during a recession, and this is an additional factor increasing the unemployment rate. Available data on the unemployment of persons with work experience during the year indicate that for adult males, in the period 1964 to 1973, 28 percent of the annual variation in the unemployment rate can be explained by the duration of unemployment over the year, 24 percent by the incidence of unemployment, and 48 percent by their joint effects. During a recession the greater average duration of unemployment over the year seems to be largely due to more weeks of unemployment per spell, rather than to more frequent spells per unemployed person.

TABLE 24.—*Dimensions of unemployment and weekly hours worked: comparison of selected years of high and low unemployment, 1957–74*

Item	1957	1958	1960	1961	1969	1971	1973	1974
	Percent							
Unemployment rate: [1]								
All civilian workers	4.3	6.8	5.5	6.7	3.5	5.9	4.9	5.6
Long duration unemployment [2]	.8	2.1	1.4	2.2	.5	1.4	.9	1.0
Percent unemployed at any time during year [3 4]	14.7	17.9	17.2	18.4	12.5	16.3	14.2	----
Percent of those with unemployment with two or more spells [4 5]	41.1	41.1	36.6	37.0	32.3	32.5	32.5	----
Unemployed by reason: [6]								
Total unemployed	----	----	----	----	100.0	100.0	100.0	100.0
Job losers	----	----	----	----	35.9	46.3	38.7	43.4
Job leavers	----	----	----	----	15.4	11.8	15.7	14.9
Reentrants and new entrants	----	----	----	----	48.7	41.9	45.7	41.6
	Weeks							
Average duration of unemployment:								
Currently unemployed	10.5	13.9	12.8	15.6	7.9	11.3	10.0	9.7
Completed spell of unemployment [7]	5.7	7.4	6.0	7.2	4.6	6.6	----	----
Sum of spells of unemployment during the year [4 5]	13.1	15.6	14.1	14.5	9.8	14.2	12.0	----
Average hours worked per week	41.0	40.6	40.5	40.5	39.9	39.3	39.3	39.0

[1] Percent of civilian labor force.
[2] Unemployed for 15 weeks or longer.
[3] Percent of those in the civilian labor force at anytime during the year.
[4] Data from the Work Experience Survey and relate to persons 14 years of age and over for 1957–61 and 16 years and over for other years.
[5] Data relate only to persons with work experience during the year.
[6] Data are not available for 1957–61.
[7] Estimate.

Note.—Data are from the Current Population Survey and relate to persons 16 years of age and over (except as noted). Detail may not add to totals because of rounding.

Source: Department of Labor, Bureau of Labor Statistics.

As unemployment rises during the cycle, layoffs account for a larger proportion of unemployment, while voluntary separation and entry and reentry into the labor force decline in relative importance. Most workers who quit their jobs presumably do not return to them. However, a substantial proportion of those on a layoff do return to their former jobs, rather than take new jobs, and this proportion is greater for layoffs attributable to a recession.

Not all workers are equally likely to experience the effects of cyclical unemployment (Table 25). Cyclical fluctuations generally have a small amplitude in the service sectors and a wide amplitude in manufacturing, particularly of durable goods. Within industries, cyclical fluctuations in employment tend to be greater for blue-collar or production workers than for white-collar or supervisory workers. The differences, however, vary from one cycle to another.

TABLE 25.—*Unemployment rates by selected demographic and industrial groups: comparison of selected years of high and low unemployment, 1957–74*

[Percent]

Group	1957	1958	1960	1961	1969	1971	1973 IV[1]	1974 IV[1]
All civilian workers	4.3	6.8	5.5	6.7	3.5	5.9	4.7	6.6
RACE								
White	3.8	6.1	4.9	6.0	3.1	5.4	4.3	5.9
Negro and other races	7.9	12.6	10.2	12.4	6.4	9.9	8.6	11.7
AGE-SEX								
Men 20 years and over	3.6	6.2	4.7	5.7	2.1	4.4	3.1	4.7
Women 20 years and over	4.1	6.1	5.1	6.3	3.7	5.7	4.7	6.5
Both sexes 16–19 years	11.6	15.9	14.7	16.8	12.2	16.9	14.4	17.5
OCCUPATION								
White-collar workers	1.9	3.1	2.7	3.3	2.1	3.5	2.9	3.7
Professional and technical	1.2	2.0	1.7	2.0	1.3	2.9	2.2	2.5
Managers and administrators, except farm	1.0	1.7	1.4	1.8	.9	1.6	1.3	2.2
Sales workers	2.6	4.1	3.8	4.9	2.9	4.3	3.6	5.2
Clerical workers	2.8	4.4	3.8	4.6	3.0	4.8	4.0	5.0
Blue-collar workers	6.0	10.2	7.8	9.2	3.9	7.4	5.4	8.3
Craft and kindred workers	3.8	6.8	5.3	6.3	2.2	4.7	3.5	5.4
Operatives	6.3	11.0	8.0	9.6	4.4	8.3	5.7	9.6
Nonfarm laborers	9.4	15.1	12.6	14.7	6.7	10.8	8.4	11.6
Service workers	4.7	6.9	5.8	7.2	4.2	6.3	5.6	6.9
Farm workers	1.9	3.2	2.7	2.8	1.9	2.6	2.4	2.6
INDUSTRY								
Nonagricultural private wage and salary workers	4.9	7.9	6.2	7.5	3.5	6.2	4.8	6.9
Construction	10.9	15.3	13.5	15.7	6.0	10.4	8.8	13.4
Manufacturing:								
Durable goods	4.9	10.6	6.4	8.5	3.0	7.0	3.9	7.3
Nondurable goods	5.3	7.7	6.1	6.8	3.7	6.5	4.8	7.9
Service industries[2]	4.2	5.7	5.1	6.2	3.5	5.6	4.3	5.2
Government workers	1.9	2.5	2.4	2.5	1.9	2.9	2.6	3.2

[1] Seasonally adjusted.
[2] Quarterly data are for service and finance industries.

Note.—Data relate to persons 16 years of age and over except for 1957 occupation data, which relate to persons 14 years of age and over.

Source: Department of Labor, Bureau of Labor Statistics.

563-280 O - 75 - 7

To a large extent the demographic characteristics of the unemployed vary over the business cycle because of differences in industry and occupation. Blue-collar workers in goods-producing industries are more likely than white-collar and service industry workers to be adult males and union members and less likely to be college graduates. Groups with these characteristics will therefore generally experience greater fluctuations in unemployment over the business cycle.

Even within an industry-occupation sector, the incidence of unemployment is uneven. Some workers undergo a sharp decline in their weeks or hours of employment during the year, while many others experience little or no decrease. This unequal sharing of unemployment results in greater inequality in the distribution of personal income during a recession.

INFLATION AND UNEMPLOYMENT

It has been suggested that there is a negative relation between the unemployment rate and the rate of increase in wages and prices, and that such a relation exists in the long run as well as over the business cycle.

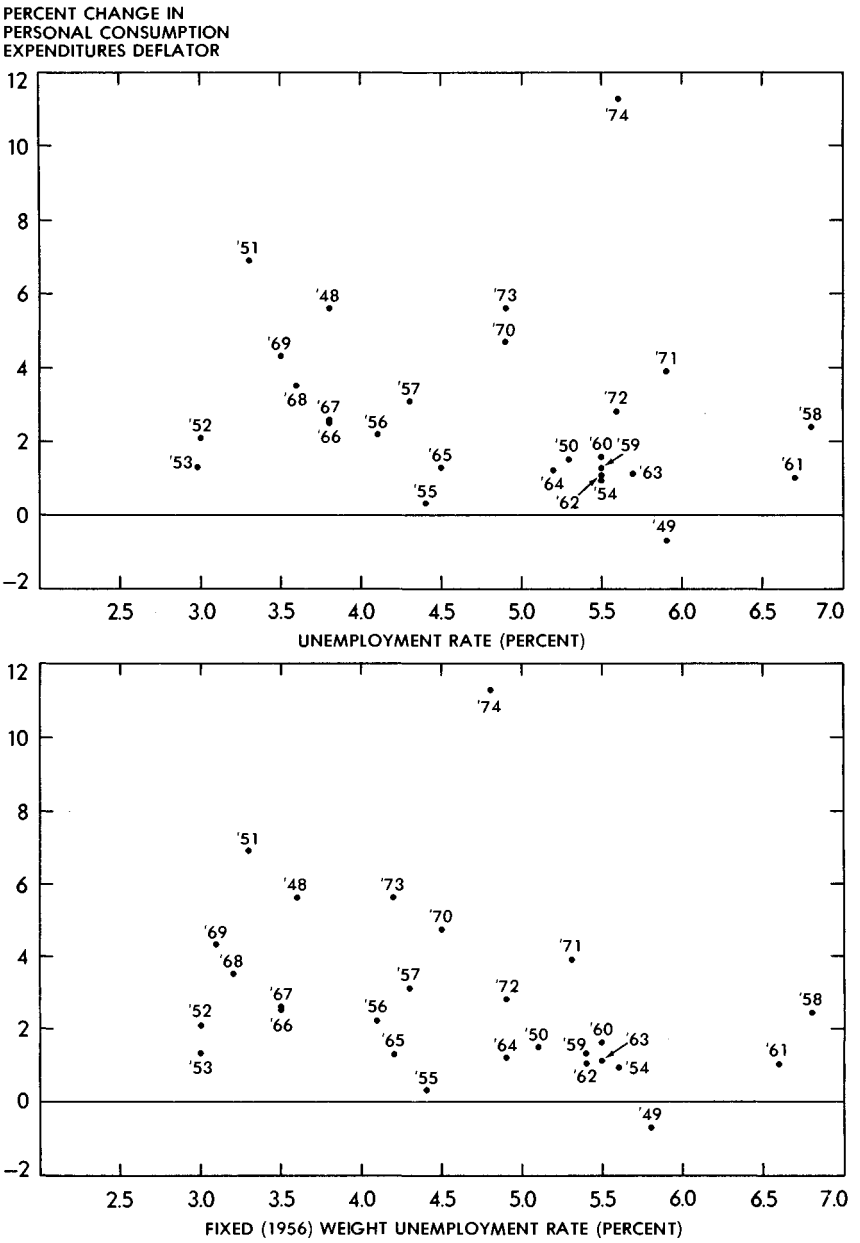
During a period of cyclical expansion, an increase in aggregate demand leads to a greater demand for labor, which is expressed by increases in wages (or in the rate of increase in wages) or by the hiring of less skilled workers at the same wage. This increase in demand for labor will result ultimately in a reduction in unemployment. Thus, in a cyclical expansion one observes a negative relation between wage-rate increases and unemployment. On the downside of a business cycle, firms with a decreased demand for labor lay off workers and lower the rate of increase in money wages. The unemployment rate will increase, accompanied by a decline in the rate of wage increase.

In the long run, however, there would not appear to be a mechanism linking the rate of unemployment to any one rate of stable wage or price increase. One would expect the unemployment rate to be determined by the magnitude of frictional, structural, and other basic forces which are independent of the particular level of a stable rate of inflation. The rate of unemployment that the economy tends to generate when the rate of inflation has no tendency to accelerate is sometimes referred to as the "natural" rate of unemployment. This is a misnomer, however, since the "natural" rate may vary over long periods in response to changes in the underlying factors which determine its level.

During the 1960's many economists believed that there was a long-run, negative relation between the unemployment rate and the rate of increase in wages or prices, initially described by the "Phillips curve" and later by functions involving additional variables and equations. Empirically, simple charts relating the U.S. rate of increase in prices or wages to the unemployment rate did show a downward-sloping relation for the 1960's, although by the 1970's there was clear evidence that the relation was not stable across decades (Chart 7, top panel).

Chart 7

Unemployment Rate and Prices



NOTE: WAGE AND PRICE CONTROLS WERE IN EFFECT JANUARY 1951–FEBRUARY 1953 AND AUGUST 1971–APRIL 1974. DURING THESE PERIODS, HOWEVER, THE CONTROLS VARIED IN COMPREHENSIVENESS.

SOURCES: DEPARTMENT OF COMMERCE, DEPARTMENT OF LABOR, AND COUNCIL OF ECONOMIC ADVISERS.

One explanation for the instability across decades is that a long-run Phillips curve exists but that the curve has been shifting outwards. Some have suggested that this shift is in response to an increase in labor force turnover resulting from the increasing proportion of women and teenagers in the labor force. Even if the tightness of the labor market for each age-sex group were unchanged—that is, if age-sex specific unemployment rates were unchanged—an increase in the proportion of the labor force comprised of adult women and teenagers would increase the measured overall unemployment rate. Hence the same rate of inflation would be associated with a higher level of unemployment.

The lower panel in Chart 7 presents data relating the rate of change in a price index to the unemployment rate, adjusted for changes in the age-sex composition of the labor force by the use of 1956 labor force weights. The adjusted unemployment rate has been falling relative to the measured rate. For example, the 1974 unemployment rate of 5.6 percent is reduced to 4.8 percent if the age-sex weights of the 1956 labor force are used. The adjustment reduces but does not eliminate the impression of outward movement of the points during the 1970's; and the pattern of points suggests that the irregularity persists. Despite considerable empirical work allowing for the role of further variables and of lags, it has proved difficult to defend the claim of a long-run Phillips tradeoff between inflation and unemployment.

It should also be noted that a series of shifting, negatively sloped short-run curves relating inflation and unemployment is theoretically consistent with the concept of a "natural" rate of unemployment which is independent of the rate of inflation in the long run. As the short-run curves shift, the observed points on the curves trace out a long-run curve, which becomes more nearly vertical as more time is given to the process. Thus, no stimulus toward lowering unemployment can be derived from a higher inflation rate once the public has adjusted to it. The long-run vertical line originates at a point on the unemployment axis corresponding to the level of the "natural" unemployment rate, a rate which, as noted earlier, depends on the level of frictional and structural unemployment and on other fundamental characteristics of the economy. The changing composition of the labor force would then be one reason to expect an increase in frictional unemployment, and hence a rightward shift of the vertical line in question, that is, a rise in the "natural" rate of unemployment.

Other factors may also have induced a higher natural rate of unemployment over time. The increase in wealth and the accompanying growth of consumer credit have made it easier to maintain consumption during periods of unemployment and may have thereby promoted more job search. Similarly, changes in the welfare program, particularly the availability of food stamps and the program in Aid to Families with Dependent Children (AFDC) for unemployed fathers, available in 23 States and the District of Columbia, now provide additional support for

unemployed persons from families with few assets and little income from other sources.

Finally, the decline in the proportion of the employed who are self-employed or unpaid family workers, from 21.5 percent in 1948 to 9.6 percent in 1974, would also tend to increase the measured unemployment rate, since both groups typically report very low unemployment, presumably because their earnings are residual and not contractual. For example, in 1974 the unemployment rate for these two groups was 0.9 percent, and the rate for wage and salary workers, 5.3 percent.

Other factors, however, would have tended to decrease the unemployment rate over time. For example, rising wage rates increase the opportunity cost of absence from a job, although this effect may have been neutralized by proportionate increases in unemployment compensation benefits. In addition, the occupational-industrial composition of employment has shifted toward white-collar jobs in the service and government sectors, and these ordinarily have lower rates of unemployment.

In summary, although there does generally appear to be an inverse relation between unemployment and inflation in the short run, the stability of such a long-run relation has been challenged. Much evidence suggests that in the long run the rate of unemployment is consistent with any fully anticipated rate of inflation. Continued research on this topic should eventually provide a more definitive answer.

DURATION OF UNEMPLOYMENT

For the average worker a spell of unemployment lasts only a few weeks. From 1948 through 1969 the average completed spell was estimated at 5.5 weeks, though it tended to be longer during a recession. It was 3.7 weeks in 1953 (unemployment rate, 2.9 percent) and 7.4 weeks in 1958 (unemployment rate, 6.8 percent).

One should note that the duration of unemployment commonly calculated from the CPS refers to a different measure, the number of weeks of unemployment experienced by those who are currently unemployed. Calculated this way, the average duration of unemployment tends to be considerably longer than the average completed spell of unemployment during the year. The difference arises because the probability of leaving unemployment the following week is related to the number of weeks the individual has been unemployed: the longer one has already been unemployed, the greater the probability of remaining unemployed. The proportion with long-term unemployment will, therefore, be greater among the currently unemployed than among those who are completing spells of unemployment. In 1969 about 4.7 percent of the currently unemployed in an average month had been unemployed for 27 weeks or more, while only 1.8 percent of all those who experienced a spell of unemployment at any time during the year were unemployed for 27 weeks or more.

The duration of unemployment can be viewed still a third way. Some persons experience several spells of unemployment in a year, which together add up to a considerable length of time. Indeed those who have completed a spell of unemployment are more likely to become unemployed again than are those who have not been unemployed. In 1973, 13 percent of those working at some time during the year had one or more spells of unemployment, but 32 percent of those with at least one spell had two or more spells, and 52 percent of those with at least two spells had three or more spells. Counting all spells, 11 percent of the experienced workers who had some unemployment reported that they were unemployed for a total of 27 weeks or more in 1973. On the average, workers who had been unemployed at some time reported 12.0 weeks of unemployment during the year. For this group, which excludes persons who were seeking jobs at some time in the year but did not work, the average length of a completed spell was 8.5 weeks and the average number of spells was about 1.7.

Estimates of the duration of unemployment from the work experience survey may be biased upwards because the survey is conducted in March but relates to the previous year and hence must rely on the respondent's memory. Retrospective reporting may be particularly faulty about brief episodes of unemployment and among those who did not receive unemployment insurance. The number of spells may thus be underestimated and their average length overestimated, particularly for women and teenagers. This would explain why the duration of a completed spell obtained from the work experience survey exceeds estimates of the duration of a completed spell based on the data in the monthly CPS.

The duration of a spell of unemployment seems to vary among demographic groups. Among the currently unemployed, the duration of unemployment is somewhat lower for women than for men, and it increases markedly with age for both sexes. In 1973 the group aged 55 and over made up 9 percent of all the unemployed, but 19 percent of those who were unemployed 27 weeks or more.

Older workers usually have longer tenure on the job and greater job security, and thus a low incidence of unemployment. Once they lose a job, however, it is much more difficult for them to find a comparable one. Older workers are likely to have had much training that was useful to their previous employer but would not necessarily be of value to any other; and because their general training was received at an earlier time their general skills may have become obsolete. Firms are reluctant to invest in an older worker whose remaining work life is shorter and whose retirement with pension is more imminent. Finally, geographic mobility is much more costly at older ages. The closing of a firm or a decline in an industry or an area may thus result in severe problems for older workers.

INTERNATIONAL COMPARISONS

Generally the United States and Canada have higher measured rates of unemployment than most other developed countries with market economies

(Table 26). The sources of unemployment, its duration, and the hardship associated with it differ greatly from country to country, and an understanding of these factors is needed to interpret the differences.

The definition of unemployment also varies among countries, and this can cause differences in the measured unemployment rate. In some countries measured unemployment represents the number of persons registered with government unemployment exchanges; such a procedure usually produces lower rates than the one used in the United States. The U.S. Department of Labor has adjusted the unemployment rates of major developed countries to conform more closely to U.S. concepts. However, although the greatest care is taken in making these difficult adjustments, it is probably impossible to achieve full comparability. The adjustments must depend on labor force surveys which differ in the wording and sequence of questions, and the true effect of these differences cannot be determined. Moreover, the vast institutional differences among countries would raise serious questions about the comparability of data even if the questionnaires were identical.

TABLE 26.—*Unemployment rates in the United States and seven other developed countries, selected periods, 1969–74*

[Percent; seasonally adjusted]

Country	Adjusted to U.S. concepts [1]				As published [2]			
	1969	1973	1974		1969	1973	1974	
			III	November			III	November
United States	3.5	4.9	5.5	6.6	3.5	4.9	5.5	6.6
Canada	4.7	5.6	5.4	5.5	4.7	5.6	5.4	5.5
France	3.1	3.5	4.1	5.6	1.7	2.1	2.5	3.4
West Germany	.8	1.0	2.6	3.1	.9	1.2	3.1	3.7
Great Britain [3]	3.0	3.0	3.2	3.1	2.4	2.6	2.7	2.7
Italy	3.7	3.8	3.2	[4] 3.5	3.4	3.5	3.0	[4] 3.2
Japan	1.1	1.3	1.4	----	1.1	1.3	1.4	----
Sweden	1.9	2.5	2.1	1.7	1.9	2.5	2.1	1.7

[1] With the exception of Canada, labor force and unemployment data are adjusted where possible to be made more comparable to U.S. definitions and concepts. Age limits roughly approximate the age at which compulsory schooling ends. For the United States and Canada published and adjusted data are identical.

[2] For Great Britain and West Germany, registered unemployed as a percent of employed wage and salary workers plus the unemployed. For others, unemployment as a percent of the civilian or total labor force. With the exception of France, which does not publish an unemployment rate, these are the rates most usually published in the country.

[3] Data as published exclude school leavers and adult students. Including such persons, the unemployment rate was 2.7 in 1973.

[4] October 1974.

Note.—The quarterly and monthly adjusted data are estimates based on annual adjustment factors and should be viewed as approximate indicators of unemployment under U.S. concepts.

Source: Department of Labor, Bureau of Labor Statistics.

The Labor Department adjustments (Table 26) bring the unemployment rates of some countries closer to the U.S. level, although for West Germany the differential widens. Significant differentials still remain. Although international data on duration of unemployment are less comparable, the United States appears to have more short-term frictional unemployment, but a relatively low rate of long duration unemployment compared to several

other countries (Table 27). It is not known to what extent differences in the proportion of those unemployed for long periods can be attributed to differences in the duration of unemployment benefits or in other provisions of unemployment compensation systems.

TABLE 27.—*Long-term unemployment in the United States and six other developed countries, selected periods, 1970–74*

Country and period	Unemployment rate [1]		Percent of unemployed who have been seeking work for: [1]		Long-term unemployment rate (percent) [1,2]	
	Percent	Relative to average 1968–1973	3 months or more [3]	6 months or more [4]	3 months or more	6 months or more
United States:						
1970	4.9	1.04	16.2	5.7	0.8	0.3
1973	4.9	1.04	18.9	7.8	.9	.4
1974: III	5.5	1.17	19.0	7.6	1.0	.4
Canada:						
1970	5.9	1.05	33.1	15.6	2.0	.9
1973	5.6	1.00	35.4	15.6	2.0	.9
France:						
1970: March	2.2	.85	56.3	40.6	1.2	.9
West Germany:						
1970: April	.5	.63	69.9	50.5	.2	.2
1972: April	.9	1.06	63.4	41.4	.6	.4
Great Britain:						
1971	3.3	1.18	----------	28.2	----------	.9
1973	2.6	.93	----------	41.6	----------	1.1
1974: July	2.7	.93	47.0	33.7	1.2	.9
Italy:						
1970	3.1	1.09	73.0	42.8	2.4	1.4
Sweden:						
1970	1.5	.68	21.8	9.8	.3	.1
1973	2.5	1.14	36.7	18.7	.9	.5

[1] Data for Canada, France, West Germany, Italy and Sweden are based on labor force surveys and are fairly comparable to U.S. data. However, they have not been adjusted to U.S. concepts. Data for Great Britain are from the series on registered unemployed and are not comparable to the United States.

[2] Percent of civilian or total labor force, except in Great Britain where it is a percent of registered unemployed plus employed wage and salary workers.

[3] Fifteen weeks or more in the United States, 4 months or more in Canada, and 13 weeks or more in Great Britain and Sweden.

[4] Twenty-six weeks or more in the United States, 7 months or more in Canada, 26 weeks or more in Great Britain, and 27 weeks or more in Sweden.

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

One reason for the greater frictional unemployment in the United States and Canada, compared to many countries in Western Europe, may be the rapid rate of growth in the labor force and in employment, primarily because of their more rapidly growing populations. From 1962 to 1972, the civilian labor force increased at annual rates of 2.1 percent in the United States and 3.0 percent in Canada; but the civilian labor force (adjusted to U.S. concepts) increased only 1.3 percent in Japan, 1.0 percent in France, and 0.7 percent in Sweden; and it declined by 0.1 percent in West Germany and by 0.7 percent in Italy. A more rapidly growing labor force may imply a larger proportion of recent entrants who have a high incidence of unemployment, though often of short duration. In addition, employers may be less reluctant to lay off workers when there is a steady flow of new workers into the market.

The relatively high level of frictional unemployment in the United States is also reflected in comparatively high rates of job turnover. For example, turnover rates in manufacturing, measured as the number of separations (quits and layoffs) per 100 employees per year, were 55 and 65 respectively in the United States and Canada in the 1960's—from 70 percent to more than 100 percent higher than in countries such as West Germany, Great Britain, or Italy, even in years of very low unemployment. Institutional and cultural factors may account for these differences in turnover. In many Western European and Asian countries worker-employer relationships discourage layoffs and quits. A distinctive characteristic of Japanese labor markets is the system of "lifetime employment," in which many workers are felt to be committed to employment by a single firm throughout their careers. The firms with such arrangements are usually large, and intrafirm job mobility replaces interfirm mobility. Available data indicate very low rates of job change in Japan, even for young workers. Among young graduates of manpower training programs in 1968, only 28 percent changed employers during the next 3 years. Among U.S. youths aged 15 to 20 who had left school and entered the labor force, however, about 53 percent of whites and 66 percent of blacks changed employers between 1966 and 1967, according to the National Longitudinal Survey. It is difficult to evaluate the efficiency of intercountry differences in job mobility, but the variation in behavior is striking.

Another factor in the differing measured unemployment among some countries is the extent of self-employment. Self-employed persons and unpaid workers in family enterprises, mainly farms, are seldom reported as unemployed. In the United States, about 10 percent of the employed are self-employed or unpaid family workers. Although in Sweden the proportion is similar to that in the United States, it is considerably higher in several other countries: 32 percent in Japan, 29 percent in Italy, 21 percent in France, and 16 percent in West Germany. Thus, relative to the United States, unemployment appears lower in these countries than it would be if only wage and salary workers were considered.

Finally, government actions can influence the extent to which measured unemployment varies over the business cycle. In Sweden, for example, extensive expenditures on training and public employment programs during recessions reduce the cyclical increase in measured unemployment. During 1973, a year of cyclical downturn in Sweden, an annual monthly average of 79,000 persons were in training or public employment programs and hence were counted as employed or out of the labor force. Since this group is large compared to the monthly number of persons reported unemployed, about 98,000, it is clear that without the programs, or if persons in the programs were counted as unemployed, the measured rate would have been substantially higher than the reported rate.

In West Germany, some adjustment to the business cycle has been made through the migration of foreign workers who now comprise about 10 per-

cent of the civilian labor force. During slack times the foreign workers, who are more prone to layoff, usually returned to their home countries. In 1974, however, this pattern seems to have changed, perhaps partly because of recent restrictions on new migrant labor; and fewer unemployed foreign workers left the country. Thus, in October 1974 foreign workers made up 13 percent of the registered unemployed, compared to 6 percent in March 1973. In January 1975 renewed government efforts were made in West Germany to encourage the emigration of unemployed migrant workers.

THE DISTRIBUTION OF UNEMPLOYMENT

The U.S. data for 1974 show a wide disparity in unemployment among demographic groups. The unemployment rate is higher for teenagers than for adults, for women than for men, for blacks than for whites, and for unskilled workers than for the skilled. These differentials have endured in U.S. labor markets for a long time. Even in 1969, a year of extremely tight labor markets, when the unemployment rate for adult men was 2.1 percent, the unemployment rate was 3.7 percent for adult women, 6.4 percent for blacks, and 12.2 percent for teenagers. The development of efficient public policy requires an understanding of the nature and causes of these unemployment differentials.

DIFFERENTIALS DUE TO LABOR FORCE TURNOVER

Labor force turnover seems to explain much of the unemployment of women and teenagers. Some teenagers and more women have a continuous attachment to the labor force; others are just beginning such an attachment; and still others enter and leave the labor force, sometimes more than once during the year. For example, although more than half the women and teenagers were in the labor force at some time in 1973, only 31 percent and 22 percent respectively were in the labor force for 50–52 weeks. Of all males aged 25 to 54, however, 87 percent were in the labor force for the entire year.

As noted above, high rates of labor force turnover generally have the effect of increasing measured unemployment, while job-to-job mobility does not always have such an effect. In our unemployment statistics, persons with a job are not classified as unemployed, even though they may be searching for another. During the recession year of 1961 less than half the persons who changed jobs for any reason, including job loss, experienced unemployment as it is defined here. In a year of normal unemployment the proportion is likely to be still lower. Entry and reentry into the labor force, on the other hand, is subject to a more direct translation into measured unemployment, since search by those working as students or in the home is counted as unemployment. Not surprisingly, a large amount of unemployment among teenagers and women is accounted for by labor force entrants and reentrants (Table 28).

In 1974, 44 percent of the unemployed adult women and 68 percent of the unemployed teenagers had been out of the labor force before becoming

TABLE 28.—*Distribution of unemployed by reason for unemployment, by age and sex, 1973–74*

[Percent]

Reason	Men 20 years and over		Women 20 years and over		Both sexes 16 to 19 years	
	1973	1974	1973	1974	1973	1974
Total unemployed	100.0	100.0	100.0	100.0	100.0	100.0
Job separations	75.0	79.4	53.2	56.5	29.0	31.9
Job losers	59.1	65.4	34.6	38.6	17.2	19.7
Job leavers	15.9	14.1	18.6	18.0	11.8	12.2
Previously out of labor force	25.0	20.5	46.8	43.5	71.1	68.1
Reentrants	21.6	18.2	41.5	37.9	29.5	30.6
New entrants	3.4	2.4	5.3	5.6	41.5	37.4
Unemployment rate [1]	3.2	3.8	4.8	5.5	14.5	16.0

[1] Unemployment as percent of civilian labor force.

Note.—Detail may not add to totals because of rounding.

Source: Department of Labor, Bureau of Labor Statistics.

unemployed, compared to only 21 percent of unemployed adult men. We can exclude both new entrants and reentrants from the unemployed and from the civilian labor force to compute an unemployment rate referring only to persons who are unemployed because they lost or quit their jobs. The resulting unemployment rate for adult women declines almost to that for adult males, and the differential between adults and teenagers is substantially narrowed (Table 29).

TABLE 29.—*Civilian unemployment rates by age and sex, under alternative definitions, 1969–74*

[Percent]

Sex, age, and year	Unemployment rate			
	All unemployed [1]	Job losers and job leavers [2]	Job losers [3]	Unemployed plus discouraged workers [4]
Men 20 years and over:				
1969	2.1	1.6	1.2	2.4
1970	3.5	2.7	2.3	3.8
1971	4.4	3.4	2.9	4.7
1972	4.0	3.0	2.5	4.3
1973	3.2	2.4	1.9	3.5
1974	3.8	3.0	2.5	4.1
Women 20 years and over:				
1969	3.7	1.9	1.3	4.9
1970	4.8	2.7	2.0	6.0
1971	5.7	3.3	2.5	7.2
1972	5.4	3.1	2.2	6.9
1973	4.8	2.6	1.7	6.0
1974	5.5	3.2	2.2	6.6
Both sexes 16 to 19 years:				
1969	12.2	3.6	2.0	13.4
1970	15.3	5.0	3.2	16.6
1971	16.9	5.3	3.6	18.4
1972	16.2	5.3	3.5	17.6
1973	14.5	4.7	2.8	15.8
1974	16.0	5.7	3.6	17.2

[1] Percent of civilian labor force.
[2] Percent of civilian labor force excluding new entrants and reentrants.
[3] Percent of civilian labor force excluding new entrants, reentrants, and job leavers.
[4] Percent of civilian labor force plus discouraged workers. Discouraged workers are defined here as those not in the labor force because they believe they cannot find a job.

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

Labor force turnover has another side, exits from the labor force; and some suggest that many of those who leave the labor force are discouraged workers who cannot find jobs. The flows of women and teenagers out of the labor force are large; quantitatively they can be expressed as the percentage of those in the labor force who withdrew. Withdrawals represented 33 percent of the teenage labor force in 1973; 24 percent of the labor force for women aged 20 to 24 and 13 percent for women aged 25 to 59; and 1.8 percent for men aged 25 to 59. Only a small proportion cited economic factors as the reason for leaving the labor force, however; and among this group still fewer cited "slack work" as opposed to what would seem to be a planned short-term job—"seasonal or temporary job" (Table 30).

"Discouraged workers" are often defined more broadly to include all persons outside the labor force who would like a job but think it is useless to seek one. Some of the people so classified in 1973, about 14 percent, have never worked. Most, about 77 percent, intend to seek work within a year, and about 40 percent had looked for a job at some time but could not find

TABLE 30.—*Reason for separation from last job for persons not in the labor force but who worked during the previous 12 months, by age and sex, 1973*

Reason for separation	Total	Age in years			
		16 to 19	20 to 24	25 to 59	60 and over
MEN					
Number (thousands)	3,714	1,427	776	660	849
Percent distribution by reason:					
Total	100.0	100.0	100.0	100.0	100.0
School, home responsibilities	41.6	61.8	64.0	21.2	2.8
Ill health, disability	12.0	1.6	2.3	34.0	21.1
Retirement, old age	14.4	(1)	(1)	9.5	55.4
Economic reasons	16.2	19.0	13.9	15.0	14.3
End of seasonal or temporary job	11.8	15.1	9.9	8.5	10.7
Slack work	4.3	3.9	4.0	6.5	3.5
All other reasons	15.9	17.6	19.7	20.3	6.5
WOMEN					
Number (thousands)	6,329	1,360	1,348	2,994	626
Percent distribution by reason:					
Total	100.0	100.0	100.0	100.0	100.0
School, home responsibilities	51.4	63.9	68.8	46.1	12.3
Ill health, disability	7.9	1.8	3.0	10.9	18.0
Retirement, old age	4.4	(1)	(1)	1.3	38.4
Economic reasons	18.9	16.5	12.8	22.8	18.5
End of seasonal or temporary job	14.4	13.8	9.7	17.2	13.5
Slack work	4.4	2.7	3.1	5.7	4.9
All other reasons	17.4	17.9	15.4	18.9	12.9

[1] Not applicable.

Note.—Detail may not add to totals because of rounding.

Source: Department of Labor, Bureau of Labor Statistics.

one. One can calculate an unemployment rate in which those who are out of the labor force because they believe they cannot find a job are added to the unemployed and to the labor force. This change increases the unemployment rate for adult men by 0.3 percentage point and for adult women

by 1.1 to 1.5 percentage points, and hence increases the male-female unemployment differential (Table 29).

When discouraged workers are included in the unemployment data, the increment in the unemployment rate fluctuates somewhat with the business cycle for adult women (by 0.3 percentage point from 1969 to 1971), but not for adult males. It is thus not the business cycle but rather demographic or structural economic factors, such as age, skill, and region, that account for most of the "discouraged worker" phenomenon.

THE MALE-FEMALE DIFFERENTIAL FOR EXPERIENCED WORKERS

When entrants are excluded from the data, as in Table 29, the sex differential in unemployment becomes very small. When the comparison is confined only to those among the unemployed who lost their jobs, the unemployment rate for women is about that of men during times of low unemployment; but it is lower than the rate for men during times of higher unemployment.

In principle, women would be more vulnerable to layoffs than men, because on average they do not have as many years of work experience as men of the same age. They are therefore likely to have accumulated fewer seniority rights and to have received less training or other investment in skill specific to the firm. In addition—and it is difficult to separate this factor from the preceding one—employers may discriminate against married women when reducing the firm's payroll. On the other hand, a smaller proportion of employed women are in occupations and industries with sharp cyclical fluctuations. Women are more likely to be employed in white-collar jobs—62 percent of women and 40 percent of men were in such jobs in 1974—and in service industries like government where unemployment fluctuates less over the business cycle. The industrial-occupational mix factor seems to dominate, since during recessions the unemployment differential by sex narrows for experienced workers. In addition, the slower rate of entry of women into the labor force during a recession narrows the sex differential in the overall unemployment rate (including labor force entrants).

Another factor that tends to increase the unemployment rate of married women is the migration of families, who generally move where the husband's job opportunities are better. Although in some cases this migration may also improve the wife's job opportunities, it more often results initially in her unemployment in a new labor market. Thus in 1970, married women aged 25 to 34 who had moved to a different county within the year had an unemployment rate of 11 percent, compared to 5 percent for nonmigrants; among married men of the same age the rates for migrants and nonmigrants were 4.8 percent and 2.1 percent respectively. This effect diminishes, however, in the course of time.

Women differ from men in the way they search for jobs. Among married women, this difference may well be a function of their dual responsibilities in the labor market and at home. In 1973, a sample of workers who had taken

their current jobs within the year responded to a survey about job search methods. Men spent more time in search: 40 percent of the men and 29 percent of the women usually spent 6 or more hours per week looking for work. Men searched over a wider area: 67 percent of the men and 45 percent of the women reported that they had traveled 11 or more miles from home in search of a job. Men also used more methods of search than women.

STUDENT AND NONSTUDENT TEENAGERS

The unemployment of teenagers who have ended their schooling is quite different from that of students seeking part-time or summer jobs often unrelated to their eventual careers.

The proportion of teenagers aged 16 to 19 who are enrolled in school in October has increased from 58 percent in 1956 to 66 percent in 1973. The proportion of students who participate in the labor force during the school year has also been increasing—from 32 percent in October 1956 to 41 percent in October 1973. As a result, 52 percent of the teenage labor force were enrolled in school in 1973 compared to only 39 percent in 1956.

Every June brings a large increase, usually a 30–40 percent increase, in the teenage labor force, which currently averages 8.1 million youths during the school months. The economy manages to absorb most of this influx. In 1969, as many as four out of five teenage students were reported in the labor force at some time during the summer; all but 11 percent eventually found jobs. About one-third of the unsuccessful jobseekers searched only 2 weeks or less, and 68 percent searched 4 weeks or less. During the summer the teenage unemployment rate rises sharply, thereby increasing the average annual rate of teenage unemployment.

In the second half of the 1960's the unemployment rate among teenage students increased in relation to the rate for nonstudents and responded little to the expansion in the economy. Because of students' increased participation in the labor force, however, employment ratios of students (employed students as a percentage of the population) also increased in comparison with those of nonstudents. Thus unemployment rates should be evaluated in conjunction with employment ratios or labor force participation rates for teenagers or any other group whose participation rate is substantially below 100 percent.

Since the middle 1950's the labor force participation rate of nonstudents aged 16 to 19 has been around 70 percent. Many of these young people are interested in full-time jobs and remain in the labor force all year. Since they are learning about the labor market, more of their unemployment arises from changing jobs than from the movement into the labor force that characterizes student unemployment.

Although youths out of school have above average layoff and quit rates, the resulting job changes may have beneficial consequences. New or relatively new members of the labor force search extensively for desirable conditions of employment, experimenting among different occupations and

employers. Moreover, since young workers do not have a work history, employers have less information about teenagers than they have about older workers, and this makes the hiring process more difficult. Information from a survey of out-of-school male youths between 1966 and 1968 suggests that job changing may be a good investment. Those who changed employers generally obtained larger pay gains over the period than those who did not; and among black youths the pay increases during the period rose consistently with the number of changes.

The unemployment rate of all teenagers has risen sharply relative to the rate of adult men since the late 1950's. This rise is due partly to the increase in school enrollment and to the changing participation pattern of students, both of which result in higher turnover. Part of this relative rise in teenage unemployment may stem from the extension of minimum wage coverage and from the growth of social legislation that raises the cost to the firm of teenage compared to adult labor.

The minimum wage may also have a more insidious long-run effect on the careers of youths, particularly teenagers out of school. Traditionally, on-the-job training has done much to improve skills. Such job training may be unprofitable for employers if they must pay higher minimum wage rates. The youths who suffer most would be precisely those who might need the most help—youths with little schooling and greater learning difficulties and those subject to discrimination.

VETERANS AND NONVETERANS

The higher unemployment rate of male veterans of the Vietnam era compared to nonveterans has been a matter of public concern. When the rate is disaggregated by age, however, it is clear that only veterans aged 20 to 24 have significantly higher rates of unemployment than nonveterans (Table 31). The relative and absolute difference in unemployment declines with age and disappears for those aged 30 to 34. The relative unemployment rate of veterans aged 20 to 34 has fallen since 1971, largely because of a decline in discharges and the consequent increasing average age of veterans compared to nonveterans.

Since young veterans include most of those recently discharged from the Armed Forces, they are likely to be new entrants or reentrants to the civilian labor force. As discussed above, entry is generally associated with higher unemployment. Veterans may also be less informed about the current civilian labor market than other entrants whose activities have been largely centered in the home and school. After being away for a number of years, veterans may find that previously acquired information about the labor market has become obsolete, and new information is difficult to acquire because of weakened ties with friends and home. This drawback disappears as the veterans acquire information relevant to job search in the civilian sector.

Under the federally financed program of Unemployment Compensation for Ex-Servicemen (UCX), newly discharged veterans with at least 90

TABLE 31.—*Unemployment rates for male Vietnam era veterans and nonveterans 20 to 34 years, by age, 1970–74*

[Percent[1]]

Age and veteran status	1970	1971	1972	1973	1974
20 to 34 years:					
Veterans	6.7	8.3	6.7	4.9	5.3
Nonveterans	5.3	6.3	5.7	4.9	6.0
Ratio[2]	1.26	1.32	1.18	1.00	.88
20 to 24 years:					
Veterans	9.5	12.3	10.6	8.8	10.9
Nonveterans	8.1	9.5	8.7	6.8	8.2
Ratio[2]	1.17	1.29	1.22	1.29	1.33
25 to 29 years:					
Veterans	4.5	5.8	4.9	3.7	4.3
Nonveterans	3.9	4.7	4.2	4.3	4.9
Ratio[2]	1.15	1.23	1.17	.86	.88
30 to 34 years:					
Veterans	3.2	3.5	3.0	2.6	2.7
Nonveterans	3.1	3.7	3.0	2.4	3.4
Ratio[2]	1.03	.95	1.00	1.08	.79

[1] Except as noted.
[2] Ratio of rate for veterans to that for nonveterans.

Note.—Vietnam era veterans are those who served after August 4, 1964. In 1973, of the Vietnam era veterans of all ages, 91 percent were 20 to 34 years of age.

Source: Department of Labor, Bureau of Labor Statistics.

days of continuous active service and a discharge other than dishonorable are eligible for unemployment compensation in any State where they wish to file a claim, under the conditions and benefits prevailing in that State. In fiscal 1974 there were 527,000 military separations and 342,000 initial claims for UCX, a claim rate of 65 percent. The average weekly benefit was $66, and benefits were received for an average of 13.6 weeks in a benefit year, about the same as for all insured unemployed.

The UCX program may encourage unemployed veterans to spend more time searching for a job; and among veterans who become students it may encourage a period of unemployment rather than withdrawal from the labor force. Most young nonveterans, on the other hand, have too little work experience to qualify for substantial unemployment insurance benefits, if any. Again, as the cohort ages, the veterans exhaust their eligibility for UCX, nonveterans acquire more job experience, and the gap in eligibility for unemployment benefits narrows. These developments also narrow the unemployment differential.

UNEMPLOYMENT DIFFERENTIALS BY EDUCATION

A pronounced inverse relation exists between education and unemployment (Table 32). The differential varies among demographic groups and over time. For example, the differential narrowed perceptibly in the last decade for males aged 35 to 54.

There is a presumption that firms would be most reluctant to lose, through a layoff or a quit, those workers in whom they had made the largest investments. Among such investments are hiring costs (such as the cost of evaluating prospective employees), and the cost of training that is specific to the

TABLE 32.—*Unemployment rates by education, sex, and age, 1962 and 1972*

[Percent]

Sex and years of school completed	Age					
	20 years and over		20 to 34 years		35 to 54 years	
	1962	1972	1962	1972	1962	1972
Men: Total	5.7	4.9	7.1	6.8	4.8	3.4
8 years	7.3	5.8	11.4	10.0	7.3	6.2
9 to 11 years	7.3	6.4	11.2	11.0	5.7	4.0
12 years	4.3	4.8	5.7	6.9	3.0	3.0
16 years or more	1.5	2.2	1.9	2.9	.9	1.7
Women: Total	5.6	5.4	8.0	7.2	4.9	4.7
8 years	6.2	5.5	13.6	8.7	6.4	5.6
9 to 11 years	8.3	7.5	13.0	14.4	7.0	5.4
12 years	5.2	5.1	7.2	6.6	4.0	4.3
16 years or more	1.5	3.0	1.9	4.0	1.6	2.4

Note.—Data relate to March of each year.

Source: Department of Labor, Bureau of Labor Statistics.

particular firm (that is, training useful almost exclusively in the firm where it is acquired). Workers with more education tend to be less homogeneous, and the less homogeneous the class of workers, the greater the resources devoted by the firm to acquiring information about the characteristics of particular individuals. More educated workers also appear to receive more training on the job, because their prior education facilitates further training and because they are more likely to have characteristics such as ability, steadfastness, and good health which firms find desirable in their trainees. Thus one expects a lower incidence of turnover (layoffs plus quits) among more educated workers. Related to these points is the different occupational and industrial distribution of those with more schooling: a greater concentration in white-collar jobs and in the service sector. As indicated above, these occupational and industrial characteristics are associated with a reduced amplitude of cyclical fluctuations in unemployment.

Workers with more education are more likely to change jobs without undergoing unemployment. It may be easier for them to search for a new job while employed because their more cerebral and portable work permits more flexible work schedules, or because prospective employers can evaluate their qualifications initially without their presence. Moreover, unemployment is more expensive for those with higher levels of schooling; as a result of their higher wages, unemployment benefits replace a lower proportion of their lost wages.

Data on job mobility which are available for 1961 by occupation but not by education support these hypotheses. Job turnover was generally much lower in the highly skilled occupations associated with more education. Thus, only 4.7 percent of male nonfarm managers and 8.5 percent of male professionals changed jobs in 1961. The rate of job change increased consid-

563-280 O - 75 - 8

erably for those with less skill, reaching 16.4 percent for laborers. When the number of changes made by those who changed jobs is also considered, the differentials in total turnover become even more pronounced; the job changers with lower skills were more likely to have made more than one change (40 percent for laborers), while a smaller proportion of the highly skilled had changed jobs more than once (22 percent for professionals). The proportion of males who changed jobs without any unemployment was 55 percent for professionals, 37 percent for operatives, and 32 percent for laborers.

It has been suggested that the increase in education over the past three decades may have reduced overall unemployment. The reasons why unemployment differs among education groups, however, need not apply to unemployment over time. For example, the amount of training specific to the firm would not necessarily respond proportionately to increases in the education of the population, although at a given moment training and education may be strongly linked. In addition, increases in education over time result in increases in schooling levels within occupations, as well as an increase in the proportion of the labor force in more skilled occupations. If unemployment is more strongly associated with occupation than with education, secular increases in the level of education would result in less than proportionate declines in the unemployment rate. For a rising level of education to have no effect on the overall unemployment rate would require an increase in unemployment rates within at least some education groups. It is not possible to test this hypothesis adequately since unemployment rates by education, controlling for demographic characteristics, are not available for the years before 1962, and hence there are not enough data points to separate cyclical from longer-term effects.

UNEMPLOYMENT DIFFERENCES BY RACE

The rate of unemployment among blacks has been about double that of whites in the post-World War II period. From 1948 through 1973 the unemployment rate averaged 8.6 percent for blacks and 4.3 percent for whites. Although the black-white differential in earnings has narrowed over the past 20 years, no such narrowing is as evident in the unemployment differential.

The race difference in unemployment may be attributed to differences in demographic and socioeconomic characteristics, as well as to current discrimination in the labor market. Some demographic and socioeconomic differences, however, may themselves be consequences of past discrimination. Among whites, unemployment rates vary across groups with different characteristics; for example, rates are higher for teenagers than for adults, for high school dropouts than for college graduates, for laborers than for professionals; and they are higher in the West than in the South. Because these characteristics differ by race, unemployment rates for blacks and whites with the same characteristics could be the same although their overall rates differed. The younger average age and lower levels of schooling and occu-

pation of blacks would imply higher black unemployment rates. The greater residential concentration of blacks in the South would, on the other hand, imply lower black unemployment rates.

The extent to which racial differences in unemployment can be attributed to various measurable factors has been computed for March 1970 from data collected in the 1970 Census of Population. As reported in the census, the unemployment rate for persons aged 16 and over was 6.3 percent for black men and 3.6 percent for white men; 7.7 percent for black women and 4.8 percent for white women (Table 33). The computations were performed separately for the more restricted group of men and women aged 25 to 64 who were experienced workers, that is, who had worked at some time during 1969. For this group the civilian unemployment rate for men was 3.5 percent for blacks and 2.5 percent for whites. By excluding young persons, those aged 65 and older, and those who had been out of the labor force the preceding year, the unemployment rate is reduced, and more so for blacks. The rate differential is thereby reduced, especially for men. It is primarily the exclusion of young workers which accounts for this effect.

TABLE 33.—*Unemployment rates by race, Spanish heritage, and sex, March 1970*

[Percent]

Item	Comparison of blacks and whites		Comparison of persons of Spanish heritage and whites not of Spanish heritage	
	Men	Women	Men	Women
Persons 16 years of age and over:				
White or white not of Spanish heritage	3.6	4.8	3.5	4.7
Black or Spanish heritage	6.3	7.7	5.8	8.1
Persons 25 to 64 years of age who worked in 1969:				
White or white not of Spanish heritage	2.5	3.1	2.4	3.0
Black or Spanish heritage	3.5	5.2	3.7	5.4
Predicted black or Spanish heritage rate if blacks or persons of Spanish heritage had the white or white not of Spanish heritage distribution of:[1]				
Age	3.4	4.7	3.7	4.6
Plus: Region	3.8	4.9	3.1	3.9
Plus: Schooling	3.3	4.2	2.5	2.5
Plus: Marital status	3.0	4.1	2.6	2.5
Plus: Occupation	2.6	3.9	2.5	2.1

[1] Using micro-data from the 1/1,000 sample of the 1970 Census of Population, the dichotomous variable unemployed-employed in the survey week in March 1970 was regressed for each group on the control variables. The mean values of the control variables for whites or whites not of Spanish heritage of the same sex were inserted into the regression for blacks or persons of Spanish heritage to obtain the predicted value for blacks or persons of Spanish heritage.

Note.—The unemployment status refers to the week prior to Census Day, April 1, 1970. For those who returned the forms late, the data may refer to April. The data, therefore, are not strictly comparable to unemployment rates obtained from the Current Population Survey and reported by the Bureau of Labor Statistics. Data relate to persons living in the 50 States and the District of Columbia.

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

The remaining race differential in unemployment rates of 1.0 percentage point for March 1970 among males aged 25 to 64 who worked in 1969 would be increased to 1.3 percentage points if adult blacks had the same distribution of age and region of residence as whites (Table 33). This

arises primarily because blacks are more concentrated in the South, where unemployment is lower. When control for the race difference in schooling is added, the differential is reduced to 0.8 percentage point; and 20 percent of the original differential is explained. A substantial reduction in the differential is obtained, however, only when marital status and occupation (10 broad categories), are introduced. With these five variables, one can account for 90 percent of the differential in unemployment. Under the same stepwise procedure as for men, 62 percent of the larger race differential for women is accounted for by the five control variables. Among women, however, age, region, and schooling have a larger effect on the differential than among men.

These results cannot easily be used to determine the extent to which the racial differences in unemployment are due to current discrimination in the labor market. Race differences in some of the control variables, such as marital status and occupation, may themselves be partly attributed to the effects of current discrimination. For example, unemployment and low income due to discrimination in employment could lead to higher rates of marital separation; employers may bar some persons from particular occupations on the grounds of race. However, other relevant variables which were not measured—such as the quality of schooling and the extent of training on the job—could also have important effects and help to explain race differences in unemployment.

Differences between blacks and whites in their basic education and other skills may also have arisen indirectly through discrimination. Labor market discrimination can lower or make more uncertain the monetary return from schooling and consequently lower the incentive for additional schooling. Perhaps more important, past discrimination, unrelated to the current labor market, clearly lowered the quantity and quality of schooling for blacks. Several decades ago when the older workers in today's labor market were of school age, the quality of schooling for blacks was vastly inferior by almost any measure. There has been considerable progress in this area, so that today available measures of schooling resources, such as expenditures per pupil, have been brought to approximate equality.

Even if discrimination in the labor market were widespread, it could result in lower wages instead of higher unemployment for blacks relative to whites with the same skill and other relevant characteristics. If there were no equal opportunity legislation or other restrictions on wages, and if employers discriminated against blacks, blacks might work for less pay than similarly qualified whites; this would provide an incentive for employers to hire them, although the incentive might not always be sufficient. If white employees were to refuse to have a black supervisor, employers might hire blacks for jobs below their skill level or maintain segregated work forces. If, because of racial tension, it were too costly to employ black and white workers of similar skill levels in an integrated work force, segregated work forces may

also develop. In each case, discrimination could take the form of reduced compensation, inferior jobs, or segregation, rather than higher unemployment.

Discrimination is more likely to lead to unemployment differentials when employers are prevented from paying different wages for equal work, because of legal, union, or social pressure. Discrimination may then to a greater extent take the form of restricted job openings for blacks, because it is sometimes more difficult to prove discrimination in hiring or promotion than in overt pay differences. Such a development could increase the difficulty of finding and maintaining employment, and hence increase the unemployment rate for blacks. Moreover, the prospect of equal pay may encourage blacks to quit jobs with low pay and search longer for more promising positions.

Empirical studies have estimated the extent to which differences in State laws requiring "equal pay for equal work" (prior to the national Civil Rights Act of 1964) affect race differences in income and unemployment, when other economic variables are held constant. The results indicate that State equal pay laws reduced the gap between the wage rates of equally skilled blacks and whites but increased the difference in unemployment. The wage effect was greater than the unemployment effect, however, and annual earnings differentials between blacks and whites consequently narrowed.

The ambiguity of the relation between discrimination and unemployment is further illustrated by a comparison of the unemployment differential between the urban South and the urban non-South during the decennial census years 1940 through 1970 (Table 34). The unemployment differential between white and black men tends to be larger in the non-South, partic-

TABLE 34.—*Unemployment rates for males in the urban South and urban non-South, by race and age, selected years, 1940–70*

Age group and year	North and West (percent)		South (percent)		Difference between black and white rates (percentage points)		Ratio of black to white rate	
	Black	White	Black	White	North and West	South	North and West	South
Males 14 to 24 years:								
1940	34.7	22.6	23.1	14.7	12.1	8.4	1.54	1.57
1950	22.9	10.7	14.0	8.0	12.2	6.0	2.14	1.75
1960	18.5	9.0	13.4	7.7	9.5	5.7	2.06	1.74
1970	16.7	8.6	12.4	6.7	8.1	5.7	1.94	1.85
Males 25 years and over:								
1940	16.5	9.4	11.6	6.4	7.1	5.2	1.76	1.81
1950	10.6	4.7	7.0	3.4	5.9	3.6	2.26	2.06
1960	9.8	3.9	7.0	3.3	5.9	3.7	2.51	2.12
1970	5.5	2.9	3.5	1.9	2.6	1.6	1.90	1.84

Note.—In 1940 black includes Negro and other nonwhite races; in 1950, 1960, and 1970 Negro only.
In 1970 white includes some races other than Negro and American Indian usually classified as nonwhite. These other races made up 0.6 percent of the combined group "white and other" in the South and 1.8 percent in the North and West.

Source: Department of Commerce, Bureau of the Census.

ularly in 1950 and 1960. Since the black-white difference in education has been larger in the South than in the non-South, unemployment rate differentials adjusted for education would show an even more exaggerated tendency for the South to display a smaller race differential in unemployment. On the other hand, broadly considered, economic opportunities have generally been greater for blacks outside the South both absolutely and relative to whites; this is reflected in the much smaller differences in earnings in the non-South between blacks and whites of the same education.

By 1950 eight States had passed enforceable fair employment laws, and by 1960 eight more had such legislation. All were outside the South. Perhaps for this reason the unemployment differential by race became much more pronounced in the non-South than in the South in 1950 and 1960. By 1970, however, the national Civil Rights Act (1964) prohibited discrimination in all States, and the regional difference in the unemployment differential became much smaller.

Factors other than equal opportunity legislation may also have influenced the regional pattern of unemployment by race. A large proportion of black workers in the North and West migrated from the South as young adults. As relative newcomers, they had less access to information about job opportunities than whites, who were more likely to have an established network of information among friends and relatives. Among blacks new to an area, information about where to expect discrimination would be gained primarily by experimentation. In the South, although many blacks migrated to urban areas, the available opportunities were probably much better known to the black community.

The persistence of a differential in unemployment between blacks and whites, after adjustment for skill and other factors, is therefore not easily explained. In part, the direct influence of discrimination may be greater on unemployment but less on wage rates now than in previous periods because of nationwide equal employment legislation. Moreover, ending all forms of current labor market discrimination would not necessarily affect unemployment in the short run. It could increase unemployment for a time as blacks found it worthwhile to search more widely for new and unfamiliar, but potentially highly rewarding, opportunities. On the other hand, groups that have been discriminated against for a long time may not immediately believe that a change has taken place, and therefore only gradually respond to the new opportunities. One would not, of course, expect substantial new investments or changes in occupation by older blacks in response to a decrease in current labor market discrimination, because they have already made investments specific to their job or occupation, and the length of their future work life is shorter.

UNEMPLOYMENT OF PERSONS OF SPANISH ORIGIN

Another group which has been subject to discrimination in the United States is made up of persons of Spanish descent who comprise about 5 per-

cent of the population and of whom about 95 percent are white. In 1974 the unemployment rate for men classified as of Spanish origin was 7.3 percent, compared to 4.8 percent for all white men. For women, the comparison was 9.4 percent and 6.7 percent respectively.

Persons of Spanish origin differ from whites as a whole in characteristics that are likely to influence their unemployment rates. For example, among men aged 25 and over in 1974, the median years of school completed by men of Spanish origin was 9.7 years, compared to 12.4 years for all white men. Difficulties in communicating in English may affect employment opportunities, although this factor interacts with level of schooling. About 16 percent of persons classified as of Spanish heritage in the 1970 Census of Population were foreign-born, compared to 5 percent for all whites. Persons of Spanish origin are also more likely to be young and to live in the western regions of the country, two categories associated with higher unemployment. For example, about 30 percent of all persons of Spanish origin in the United States live in California, compared to about 10 percent for all whites in the United States; and the unemployment rate for California tends to be higher than the national average—44 percent higher in the period 1969 through 1973.

To determine the extent to which particular demographic and economic characteristics account for the difference in unemployment between those of Spanish heritage and whites not of Spanish heritage, an analysis similar to that for the black-white comparison was made on the basis of data from the 1970 Census of Population (Table 33). Although in the census (March 1970), men of Spanish heritage aged 16 and over had substantially higher unemployment rates than other white men, the differential of 2.3 percentage points is nearly halved when the data are restricted to men aged 25 to 64 who worked in 1969. The decline in the differential is largely due to the exclusion of youths aged 16 to 24, who make up a greater proportion of the Spanish heritage labor force than of the white labor force. Of the 1.3 percentage point differential in unemployment rates for adult men who worked in 1969, 0.6 percentage point, or nearly half, is attributable to region, that is, to the greater relative concentration of men of Spanish heritage in the West, where unemployment is high. Nearly all (92 percent) of the differential in unemployment rates of adult men is explained by the three variables: age, region, and schooling.

In March 1970 women of Spanish heritage aged 25 to 64 who worked in 1969 had higher unemployment rates than white women not of Spanish heritage, although 63 percent of the differential is due to differences in age and region (Table 33). After adjusting for differences in schooling, as well as in age and region, one finds that women of Spanish heritage actually have lower unemployment rates than other white women with the same characteristics—2.5 percent compared to 3.0 percent.

The analysis of unemployment differences between persons of Spanish heritage and other whites suggests that the significantly higher unemploy-

ment rate of the former is due to differences in age, region, and schooling. The extent to which these differences in characteristics are attributable to historical discrimination in the United States is not known, but it would seem that differences in unemployment rates are not a consequence of current labor market discrimination. This analysis does not, however, shed light on the magnitude of discrimination against persons of Spanish origin in other phases of their economic and social life.

UNEMPLOYMENT AND INCOME MAINTENANCE PROGRAMS

Assistance to the unemployed has been widely accepted on grounds of equity and economic efficiency as an appropriate Government function since the Great Depression of the 1930's. Greater equity can be achieved by increasing the income of the unemployed through transfers which spread the cost of unemployment among the public. In addition, the transfers may stimulate the employment of otherwise idle resources by increasing the aggregate demand for goods and services. Two major Government programs of the last four decades to provide income support for the unemployed are the unemployment insurance system and public service employment.

UNEMPLOYMENT, INCOME, AND POVERTY

A cyclical downturn in business activity is associated with lower employment and a shorter average workweek for the employed. The effect of a downturn is to change the level and distribution of aggregate earnings. Because approximately 95 percent of the labor force is employed, however, even a sharp rise in the unemployment rate means a relatively small decline in employment and therefore in earnings. For example, from 1969 to 1971 the unemployment rate increased from 3.5 to 5.9 percent, with little change in the rate of labor force participation; employment as a percentage of the labor force decreased from 96.5 percent to 94.1 percent, or by 2.5 percent. The average length of the workweek decreased by 0.6 hour (1.5 percent) to 39.3 hours. Thus, aggregate hours worked per member of the labor force decreased by approximately 4 percent. In the most recent cyclical downturn, from the fourth quarter of 1973 to the fourth quarter of 1974, the aggregate hours worked per member of the labor force fell by approximately 3 percent.

This decrease in the hours of employment during a cyclical downturn is not shared equally throughout the labor force. Rather, for most workers little or no decline occurs in their hours of work, while for others the decrease is large. The result is more inequality in the distribution of income from employment. Empirical studies of income inequality among families and adult males in the post-World War II period demonstrate that inequality increases in recessions and decreases during cyclical expansions, but there has been no secular trend.

Because many unemployed individuals are eligible for income transfers, the decline in income for those who become unemployed is smaller than

might be suggested by the decline in hours of work or in labor market earnings. In 1974 experienced workers who became unemployed because of layoffs (and in some cases because they quit their jobs) generally received unemployment insurance benefits for up to 26 or 39 weeks; and if income were sufficiently low, they qualified for income maintenance programs. Those who remained employed, though their hours of work fell, and those who were unemployed but ineligible for unemployment benefits could have received assistance from other income maintenance programs if their incomes were sufficiently low. Temporary legislation enacted in December 1974 increases the proportion of workers covered by unemployment insurance and extends the benefits up to a maximum of 52 weeks during this period of high unemployment.

Recent studies based on 1971 survey data have estimated the extent to which transfer programs replace income losses associated with rising overall unemployment. The transfer programs include unemployment insurance, Aid to Families with Dependent Children, food stamps, and social security. Among households headed by a person aged 65 or under and at the poverty level before receiving the transfers, the programs were estimated to replace 31 percent of the lost earnings of male-headed households and 56 percent of the lost earnings of female-headed households. The replacement ratios were lower for higher-income families.

One study also calculated the average family income loss, after taking account of transfer benefits and changes in work participation of other family members, arising from unemployment of the family head. Among households experiencing some unemployment and headed by a man aged 65 or under, the average annual family income loss (net of transfers) associated with a 1 percentage point higher unemployment rate was estimated to be 5.7 percent for those at the poverty level. At five times the poverty level, the loss was 4.9 percent of the family income. Among households headed by a woman aged 65 or under, the estimated loss was approximately 3 percent for all income levels. There was, of course, considerable variation in income loss within these groups.

These estimates of income loss may be biased upward for several reasons. In surveys there is much more underreporting of transfer income than of earned income. Moreover, the appropriate comparison is with income after deduction of payroll and income taxes and of work-related expenses; and, although transfers are not subject to payroll and income taxation, the estimates were made for pretax earnings. In addition, no estimate was made of the value of extra home productivity or leisure arising from the reduced work time, a value that may not be negligible during brief spells of unemployment. The study is especially likely to underestimate replacement of lost earnings by transfers when the increased unemployment results from the business cycle, because the estimates were based on differences in income and unemployment between households at a moment in time. Cyclical increases in unemployment involve a larger proportion of workers eligible for unemployment compensation, because the unemployment is more

heavily weighted toward layoffs than quits or labor force entry, and toward the covered sector of the work force. In addition, the maximum number of weeks for which benefits are available generally increases in a recession. For example, 64 percent of the unemployed received benefits in the high unemployment year of 1961, compared to 39 percent in the low unemployment year of 1966. On the other hand, additional factors may lead to a downward bias. The study could not account for the loss of employees' fringe benefits when they are unemployed, or for the adverse psychological and other effects due to the greater uncertainty among both the employed and the unemployed when unemployment rises. However, it would appear that the transfer programs may replace a substantial proportion of the loss in after-tax earnings, particularly during cyclical increases in unemployment.

Even during times of relatively low unemployment, more weeks of unemployment and lower incomes are associated with each other. Contrary to common belief, however, unemployment is no longer a major cause of poverty. Although during the Great Depression the relation between unemployment and poverty was undoubtedly strong, in the postwar period the relation weakened. Table 35 shows data on the work experience of persons who headed poverty households in 1959 and 1972, years with roughly the same level of unemployment (5.5 percent) although the number and percentage of the population in poverty declined considerably over the period.

Although failure to work a full year was strongly associated with poverty in both years, only a minority of the heads of households in poverty cited

TABLE 35.—*Work experience of family heads below the low-income level, by sex, 1959 and 1972*

Work experience of head	Total		Male head		Female head	
	1959	1972	1959	1972	1959	1972
Total families (thousands)	8,320	5,075	6,404	2,917	1,916	2,158
Total families (percent)	100.0	100.0	100.0	100.0	100.0	100.0
Did not work full year	61.5	76.0	54.7	65.4	84.2	90.4
Unemployment a main reason for not working a full year	15.6	13.2	18.4	16.8	6.4	8.4
Worked 1–49 weeks	14.4	11.1	17.3	14.9	4.9	5.8
Did not work, unable to find a job	1.2	2.2	1.0	1.9	1.5	2.6
Unemployment not a main reason for not working a full year	45.9	62.7	36.3	48.5	77.9	82.0
Worked 1–49 weeks	16.5	19.1	14.8	16.4	22.3	22.7
Did not work and did not seek a job	29.4	43.7	21.5	32.2	55.6	59.3
Keeping house	10.9	19.0	(1)	(1)	47.5	44.7
Ill, disabled	9.5	14.6	10.8	17.1	5.4	11.3
Retired, going to school, and other reasons	8.9	10.1	10.7	15.1	2.7	3.3
Worked a full year (50–52 weeks) [2]	38.5	24.0	45.3	34.6	15.8	9.6

[1] Not applicable.
[2] Includes head in Armed Forces.

Note.—Persons below the low-income level are those falling below the poverty index adopted by the Federal Interagency Committee in 1969.
Data for 1959 and 1972 are not exactly comparable because of changes in definition and methodology.
Detail may not add to totals because of rounding.

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

inability to find work as the reason for working less than a full year. In 1959, only 15.6 percent of the heads of poverty households worked less than a full year because they could not find work, and by 1972 this percentage had decreased to 13.2 percent.

An increasing proportion of poor families are headed by someone who works only part of the year—or more often, who does not work at all—because of ill health, old age, or home responsibilities, not from inability to find a job. Low wage rates, however, remain an important cause of poverty.

The decline in the relative importance of unemployment as a reason for poverty is primarily related to rising real wage rates during periods of employment and to increased real income supplements for the unemployed. In addition, for the same overall unemployment rate, the proportion of male heads of households experiencing unemployment has been declining.

There is some increase, or a slowing rate of decrease, in poverty during recessions. The increase in poverty is greater, the deeper the recession. For those with fixed incomes, poverty increases as the rate of inflation rises. Data for 1974 are not yet available; but it can be anticipated that because of the cyclical rise in unemployment and the high rate of inflation, poverty is likely to have increased over the year and may increase still further in 1975.

UNEMPLOYMENT INSURANCE SYSTEM

The nationwide unemployment insurance system, initiated by the Social Security Act of 1935, is a joint program administered by the States within broad Federal guidelines. As a result of Federal tax law, private nonfarm wage and salary workers (except domestics and employees of very small nonprofit organizations) and certain State employees are covered by the unemployment compensation system. In some States, agricultural, domestic, local government, and additional State workers are also covered. Separate Federal programs exist for unemployed Federal employees and unemployed persons recently discharged from the Armed Forces. A temporary, wholly federally financed program for employees not covered by the State or other Federal programs was enacted in December 1974. (See the discussion of the Unemployment Assistance (UA) program below.)

A worker must satisfy several "tests" to be eligible for unemployment benefits. These tests refer to cause of unemployment, duration of covered employment, earnings in covered employment, and availability for work. The worker usually cannot receive benefits unless he or she is available for, actively searches for, and does not reject, suitable employment. Benefits are available in all States for those unemployed because of a job layoff. A waiting period of 1 week after the filing of the claim is required before benefits begin in most States. In some States and under certain circumstances, benefits are also available to those discharged for misconduct and to those who voluntarily left a job with "good cause." In the latter two situations, the conditions of eligibility, the length of the waiting period before benefits can begin, and the extent of benefit reduction vary considerably from State to State. Strikers are generally not eligible for unemployment compensation, although in New

York and Rhode Island they become eligible after a waiting period of several weeks. There are many other specific provisions for eligibility, and they too vary from State to State.

The duration of regular benefits usually increases with the length of the worker's past employment in jobs covered by the program, up to a maximum of 26 weeks of benefits in most States. Extended benefits have been granted for up to an additional 13 weeks in States with high rates of unemployment, for a maximum of 39 weeks. Public Law 91–373 requires that States provide these 13 weeks of additional compensation for those who have exhausted their regular State benefits if two conditions are satisfied. First, the average State-insured unemployment rate for the 3 most recent calendar months must equal or exceed 4.0 percent. Second, the average rate for this 3-month period must be at least 120 percent of the average of such rates for the same weeks in the prior 2 years. Under Public Law 93–368, however, States can elect to waive the "120 percent rule" to extend benefits. By the end of December 1974, 11 States were providing extended benefits, one under this waiver.

New Legislation

In response to the sharp rise in unemployment in the second half of 1974, two new laws that affect the unemployment insurance program were enacted in December 1974. The Emergency Unemployment Compensation Act provides for an additional 13 weeks of benefits, for a maximum of 52 weeks. The new benefits go into effect in a State when the insured unemployment rate averages 4 percent or more over the preceding 13 weeks, either nationally or in the particular State. Benefits cease when neither condition is satisfied. The program became operative in January 1975. Using general funds, the Federal Government reimburses the States for 100 percent of the benefits paid under this program, which lasts through 1976.

Under Title II of the Emergency Jobs and Unemployment Assistance Act of 1974 a special unemployment compensation program was established to provide benefits lasting up to 26 weeks for some unemployed workers who are ineligible for the regular State or Federal programs. Unemployment Assistance benefits are available to workers who would satisfy the State requirements when two modifications are made in the regulations. One is that all wage and salary employment is treated as covered, a benefit to those who have had part or all of their previous employment in industries not covered by the State program (12 million wage and salary workers). The other modification is that the most recent 52 weeks can be used to satisfy the employment requirement, replacing the usual practice in the State programs of using the 52 weeks prior to the most recent 3-month period. This primarily benefits recent entrants to the labor force. When employment records are not immediately available, claims for Unemployment Assistance may be evaluated on the basis of an affidavit filed by the applicant. Unemployment Assistance, which is fully federally financed from general revenues, becomes operative in a local area when for 3 consecutive months the national unemployment rate averages 6.0 percent or more, or the local

area unemployment rate averages 6.5 percent or more. The program ceases in a State when these conditions are no longer satisfied. The program started accepting claims in January 1975; the legislation terminates in December 1975.

Farm and domestic workers had generally been excluded from regular State unemployment coverage, largely because of the substantial administrative difficulty in verifying previous employment, previous wages, availability for work, and search for work, and in experience rating of employers. These problems unavoidably remain in the UA program. One study estimated that the two new unemployment compensation laws would induce an increase in the measured unemployment rate by about 0.7 percentage point. However, because of the expected high level of unemployment in 1975, the social benefit of extending income support to a broader group of unemployed workers was considered of greater value than the difficulties created by the programs.

Benefits

The average weekly number of persons receiving unemployment benefits was 2.3 million and the average check was $64 in 1974. Some received benefits for less than a full week because they started a job or had a part-time job. Benefits are related to earnings and range among the States from one-half to two-thirds of the worker's recent average weekly wage, up to a State maximum. The maximum basic benefit varies from about $60 to $117 per week. The percentage of unemployed claimants who are at the maximum also varies widely from State to State. For example, in 1972 the percentage of newly insured claimants eligible for the maximum ranged from 12 to 73 percent, while the average for the country was 44 percent. Ten States and the District of Columbia provide "dependents' allowances" for children, and some of these States also provide them for a nonworking spouse. These benefits can amount to a maximum of an additional $46 per week. State unemployment compensation benefits are not subject to taxation.

Some union contracts have provisions for private supplements to State unemployment compensation. For example, United Auto Workers' contracts have established Supplemental Unemployment Benefit Funds (SUB Funds) to which the employer contributes. A worker with at least 3 years' experience could receive a stipend from the fund for up to 52 weeks which would make his total State plus SUB Fund compensation approximately 95 percent of his regular take-home earnings, less $7.50. In January 1975 the average weekly SUB Fund benefit was approximately $100 for a worker receiving State unemployment insurance benefits and $185 for a worker who had exhausted the State benefits. SUB Fund benefits are subject to income taxation.

Changes in Coverage and Benefits

Although coverage under the unemployment insurance program has been extended periodically since its inception, the percentage of the unemployed

who receive benefits has declined (Table 36). This seeming paradox is explained by the changing composition of the unemployed. Over the post-World War II period, there has been a large increase in the proportion of recent entrants in the labor force. Recent entrants have high unemployment but are less likely to meet the eligibility requirements of the unemployment insurance system, and this accounts for the increasing proportion of the unemployed who do not receive benefits. Unemployed youths and women are more likely to be entrants or reentrants and therefore are less likely to receive benefits. Moreover, the increase in school attendance among those aged 16 to 24 has led to a change in work behavior: students enter and reenter the labor force, often more than once during the year, taking short-term jobs, and quitting more often than older workers. For these reasons, the percentage of unemployed youths receiving benefits under State programs has declined since 1960. Adult men, in contrast, are more likely to qualify for unemployment benefits because they have sufficient work experience and because a layoff more frequently precipitates their unemployment. The exten-

TABLE 36.—*Insured unemployment as percent of total unemployment and unemployment benefits as percent of average weekly earnings, 1948–73*

Year	Insured unemployment as percent of total unemployment						Average weekly State unemployment benefits as percent of average weekly earnings in covered employment
	Total insured [1]	State insured [2]					
		Total 16 years and over	Men		Women		
			16 to 24 years	25 years and over	16 to 24 years	25 years and over	
1948	63.5	43.1					34.1
1949	68.0	54.2					36.0
1950	48.8	46.0					34.4
1951	48.7	47.2					32.2
1952	56.8	55.4					33.0
1953	58.2	54.0					32.3
1954	58.1	52.9					33.5
1955	49.1	44.4					32.1
1956	48.1	44.2					33.3
1957	54.9	50.6					33.5
1958	71.0	54.9					35.3
1959	56.1	45.0					33.4
1960	53.8	49.5	24.0	63.3	19.2	63.9	35.2
1961	63.5	48.6	25.3	62.8	19.2	58.6	35.4
1962	49.8	45.6	20.9	60.3	17.1	58.3	34.9
1963 [3]	48.5	44.4	19.5	59.4	16.7	58.6	34.6
1964	46.3	42.4	16.8	60.9	14.8	56.5	33.8
1965	43.1	39.5	14.6	59.9	12.3	54.6	33.8
1966	39.3	36.9	11.9	61.0	9.8	53.3	34.7
1967	42.7	40.5	13.6	72.4	11.8	53.2	34.7
1968	42.1	39.4	11.7	74.0	9.8	56.9	34.3
1969	41.6	38.9	10.7	76.6	9.3	57.3	34.4
1970	50.6	44.2	16.0	76.9	12.8	65.1	35.7
1971	46.3	43.1	17.6	74.2	13.4	58.6	36.5
1972	45.1	38.2	15.7	70.6	11.2	52.6	35.9
1973	41.4	37.8	15.7	71.7	11.2	53.8	36.0

[1] Includes persons covered under the following unemployment compensation programs: State, Federal employee, Railroad Retirement Board, and veterans. Also includes Federal and State extended benefit programs.

[2] Includes only persons covered under the State programs and excludes all other programs as well as Federal and State extended benefit programs.

[3] Totals include Puerto Rican sugar cane workers beginning July 1963; but they are excluded from data by sex and age.

Note.—State insured unemployment data are not available by age and sex prior to 1960.

Source: Department of Labor, Manpower Administration.

sions of coverage are reflected in the rising proportion of adult men who receive benefits. Thus, even though the proportion of adult men receiving benefits has risen, two factors have caused a reduction in the proportion of the total unemployed receiving benefits: an increase in the proportion of the unemployed who are young workers and women; and a decline in the proportion of unemployed youth receiving benefits.

During recessions, an increased proportion of the unemployed receive benefits, especially when the data include recipients of extended benefits. In part this reflects the greater proportion of job losers and adult men among the unemployed. Due to the new legislation, an unusually high proportion of the unemployed will receive benefits in 1975.

As indicated in Table 36, the average weekly unemployment insurance benefit has ranged from 32 to 37 percent of average gross weekly wages in covered employment. This ratio underestimates the actual replacement of the earnings loss of the insured unemployed because they usually earn less than the average covered worker, and unemployment benefits are not taxed. It has been estimated that for unemployed insured male family heads in families with income below 150 percent of the poverty line, benefits may replace about 70 percent of lost income after taxes; for those with higher income, the replacement ratio may be about 40 percent.

Effects of Unemployment Insurance

The unemployment compensation system may itself influence the frequency and duration of unemployment, and hence the measured unemployment rate. The State unemployment insurance system is funded by taxes levied on employers in proportion to their wage bill. The tax rate varies according to the employers' experience rating, which is based on the extent to which their workers draw benefits from the system. Because the variation in tax rates is set within narrow margins, however, the experience rating is not closely matched to benefits. Thus, in firms with high layoff rates the benefits to employees over a long period are likely to exceed the employers' contribution to the fund. In effect then, the tax and benefit structure tends to subsidize seasonal and casual employment relative to stable employment. For example, it makes the planned annual layoff an attractive alternative to the paid vacation for employers of lower-wage workers. This in turn may induce an increase in the frequency of measured unemployment and thereby lead to an increase in the unemployment rate.

Unemployment benefits may also tend to lengthen the duration of insured unemployment. The system partially compensates for the time spent searching for employment, thereby reducing the cost of longer unemployment. The system clearly makes it easier for a worker to maintain his accustomed pattern of consumption during a longer search period.

Studies of interstate differences in unemployment have found that the rate is higher where benefits are high relative to wages. The denial rate, based on administrative decisions regarding eligibility, is also important

in explaining interstate differences in insured unemployment. The denial rate appears to be higher in States devoting more resources to administering the program.

The longer period of unemployment stimulated by unemployment compensation may represent a worthwhile investment for society. If a longer search leads to a job with higher wages and fringe benefits, more pleasant working conditions, or a longer expected tenure, it benefits both the individual and society. Some unemployed persons, however, may have no intention of accepting a job—perhaps because they are planning to leave the labor force or simply because they want a vacation—but go through the necessary steps to collect benefits.

Some have questioned the equity of the unemployment compensation program largely because its benefits are tax free. The greater the family's other income, the larger is the benefit net of taxation that a family receives from a member who gets unemployment compensation rather than wages. A low-paid worker in a high income tax filing unit could actually receive more income net of taxes and work-related expenses by being unemployed than by being employed.

In spite of the difficulties inherent in the current unemployment compensation program, it is nevertheless the most effective way of providing financial support for those who suffer a loss in income due to unemployment.

PUBLIC SERVICE EMPLOYMENT

Federal public service employment programs are a means of increasing employment opportunities, particularly during periods of high unemployment. It is intended that Federal revenues will be used to employ persons who would otherwise be jobless, in government jobs that would not otherwise exist.

The Emergency Employment Act of 1971 (EEA) provided the first large-scale public employment program broadly applicable to the unemployed population since the Works Progress Administration (WPA) of the 1930's. Special types of public employment programs for particular target groups, however, have been funded on a more limited scale since the 1960's, for example, the summer employment of youth in the Neighborhood Youth Corps and the subsidized employment of the elderly in Operation Mainstream. In contrast to the WPA, which was administered by separate Federal agencies created for the task, the Public Employment Program (PEP) under EEA was essentially a form of revenue sharing, with the Federal Government supplying the funds and State and local governments actually administering the program.

PEP was conceived as a countercyclical program to provide "transitional" jobs at a time when the unemployment rate was about 6 percent. PEP participants were more likely than the average unemployed person to be veterans, male, and well educated (75 percent had graduated from high school). In fiscal 1973, when the program was in full operation, an estimated 150,000

man-years of employment were funded by the PEP program. The extent to which these numbers reflect net additions to State and local employment—that is, employment that would not have occurred without the program—can only be estimated. Studies indicate that each PEP job created less than a job, and that this "displacement effect" increased as time passed and as the possibility of substituting Federal for State and local funds increased. Several estimates put the displacement effect after 2 years in the range of 50 percent.

The Comprehensive Employment and Training Act (CETA), which became operative in 1974, provides public employment funds in two forms to States and localities acting as prime sponsors. Under Title I, bloc grants for manpower programs allocated to the sponsor may at the sponsor's discretion be applied to public service employment or to any other activity related to manpower. Title II is labeled Public Employment Programs, but the funds can be used for either public service employment or traditional manpower programs, such as on-the-job training. Title II funding is to be provided only to areas where the unemployment rate has averaged 6.5 percent or higher for 3 consecutive months.

Estimated outlays on the various parts of CETA for fiscal 1975 are: Title I, $1.6 billion; Title II, $585 million; Titles III and IV (Indians, migrants, Job Corps), $342 million. An additional $250 million will be spent in fiscal 1975 for public service employment from 1974 CETA authority that allowed a one-time appropriation for continuing programs under the EEA. Of this estimated total of $2.8 billion, $380 million was spent on summer youth programs in 1974. It is expected that the number of CETA public service jobs will increase from approximately 85,000 in fiscal 1974 to 170,000 during 1975 and 1976. Compensation and administrative costs per man-year are anticipated to be about $9,000.

New Legislation

The Emergency Jobs and Unemployment Assistance Act of 1974 supplements CETA by providing a public service employment program known as the Temporary Employment Assistance (TEA) program. Under this new legislation an additional $875 million will be available during fiscal 1975 to State and local government prime sponsors to create as many as 97,000 jobs. The funds may be used for projects that extend over a 12-month period and employ persons who have been unemployed for at least 30 days, or at least 15 days in areas of excessively high unemployment. "Preferred consideration" is to be given to those who have exhausted their unemployment compensation. The Administration has also requested that $125 million be restored to the TEA program in fiscal 1975. The TEA program together with CETA would then provide up to 280,000 jobs when both programs are in full operation.

563-280 O - 75 - 9

Effects of Public Employment Programs

Public employment has been suggested as a way of reducing unemployment during recessions. Some argue that public employment, whereby people are directly hired by the government, is superior to other macroeconomic instruments with respect to creating more employment per dollar spent. Estimates have been made of the net employment generated by a given expenditure on public employment, compared to that generated by an equal expenditure on government purchases from the private sector or by an equal reduction in the tax bill. On the basis of the PEP experience, public employment was found to create more additional jobs in the very short run (1 or 2 quarters after the program begins) than either of the other two policies. After 5 or 6 quarters have passed, however, the superiority of public employment as a tool for creating jobs was found to diminish as State and local governments substitute Federal funds for their own funds. Eventually, this displacement of State and local funds with Federal funds would allow State and local taxes to be reduced (or grow at a slower rate) and in turn stimulate economic activity, including employment. Then, in effect, the public employment funds can be viewed as generalized revenue sharing funds, with Federal sources (taxes, deficits) replacing local funding of local projects.

The reduction in unemployment due to public service jobs would depend partly on the effect of the program on the size of the labor force. If public service jobs could be confined only to persons with previous work experience and with a proved period of unemployment, then the employment-generating effects would be directly translated into reduced unemployment.

There are other advantages, and these are frequently cited to support public service employment. For some workers the jobs may provide training and, by allowing a regular work schedule and environment, slow the depreciation of prior training and work habits. Some useful output is produced; income maintenance is provided without the welfare stigma. Critics of public employment have noted, however, that a public service job reduces the time available for seeking more permanent private sector employment, and for many workers it would lengthen the time away from usual employment. Time away from usual work may increase the depreciation of skills specific to particular jobs.

Although public employment appears to have a short-run advantage over other policy tools in creating jobs, it also appears more likely than other policies to put pressure on the price level. Indeed, the more successful the program is in employing individuals who would normally be seeking jobs or working in the private sector, the tighter the private sector labor market will be; and rising wages and prices will result. The inflationary impact would be smaller if the program were financed by an increase in taxes rather than by an increase in the debt. The jobs lost as a result of the tax increase, however, are likely to be more productive than the jobs created by the public

employment program, both because of the difficulty of matching the skills of the unemployed with those required for public service jobs and because the assigned tasks are often ones that would otherwise be given low priority.

In summary, a public employment program that is effective as a countercyclical measure would presumably provide jobs that State and local governments would not otherwise create, that can be established quickly, and that can be readily eliminated as job opportunities in the private sector increase. To ensure that jobs are net additions to employment, it may be necessary to create distinct tasks in separate and visible agencies set up for the purpose. To provide productive employment, the jobs have to be suitable for persons of diverse prior training, employment experience, and age; and they must require at most a very short period of training. These sometimes conflicting conditions may increase the difficulty of creating a successful program.

CHAPTER 4

Inflation During The Past Decade

THE PAST 10 YEARS HAVE BEEN CHARACTERIZED by an average growth rate of aggregate expenditures that is very high by historical standards and that has substantially outstripped the sustainable growth of supply of real goods and services. Contributing significantly to the growth in aggregate demand were rapidly increasing Government expenditures along with monetary policies that were appreciably more expansionary than those in earlier post-World War II periods. In addition, a sharp rise has occurred in foreign expenditures on American goods in recent years. Supply reductions also contributed to imbalances between aggregate supply and demand, particularly in the past few years: crop failures and reduced oil supplies are the most notable examples. Without neglecting specific features, the U.S. inflation since the mid-1960's can nevertheless be analyzed in terms of a general conception of the inflationary process that emphasizes the role of monetary and fiscal policies, and the decision-making process that leads to these policies. A brief outline of this conception will be useful.

Governments can achieve certain short-term objectives by following policies that allow the aggregate demand for goods and services to rise faster than the supply can rise in view of the available resources. One such objective is to keep the rate of resource utilization very high and to postpone the temporary underutilization that occurs in some phases of the business cycle. Another objective is to embark on spending programs without making the burden explicit to the public by correspondingly higher taxation, and thus without raising the question of the distribution of this burden. At high rates of resource utilization, however, such policies will provide a stimulus only so long as the public expects less inflation than will actually be developing, and so long as the public therefore acts as if more real income were available than will in fact be earned. Concerning the recent inflationary period, opinion surveys as well as actual trends in real wage rates and real profits suggest a substantial underestimate of the future inflation rate and a corresponding overestimate of prospective real incomes by the public. Since people learn from their experience, efforts to continue providing such stimulus require generating an inflationary process that will show a strong tendency to accelerate. At some stage it becomes imperative to put an end to such a process.

When the inflationary phase has lasted so long that expectations of further inflation are firmly embedded in the cost trend, a shift to policies of restraint

first exerts an adverse influence on output and the desired price deceleration effect materializes only with a lag. Any convincing interpretation of the events during 1970 and 1973–74 must stress this difficulty.

During 1973 and 1974 this difficulty was magnified by a steep increase in raw material prices and by the price effects of specific capacity shortages in a number of industries. Even when major specific cost increases occur, monetary and fiscal restraint can prevent a lasting acceleration of the general price trend; yet such policies will not be able to prevent a temporary steepening of the rate of general price increase, especially in an environment influenced by inflationary expectations. The explanation here also is that the adverse effect of policies of restraint on output will precede their desired effect on prices. Policies of restraint could keep even permanently tighter supplies, resulting from "natural" or from "institutional" factors, from touching off continuing inflation, though when changes of this sort occur no policy may be capable of preventing a lasting adverse effect on output.

Lags of price response behind output response are among the characteristics of adjustment periods which may bring substantial discomfort, even if methods are now available for greatly reducing the hardships suffered in such phases of development. During these phases political pressures become strong to adopt stimulative policies prematurely on a scale that would rule out any appreciable decline of the rate of inflation. Since it is impossible to live indefinitely with an explosive inflationary process, the resumption of expansionary policies is in turn apt to evoke strong pressures to adopt comprehensive wage and price controls. These controls would allegedly enable us to follow the desired expansionary policies under circumstances in which prices and wages are directly regulated according to acceptable norms. However, if after much unsuccessful experimentation that approach were to be followed through with the consistency needed to make it effective, it would lead to an economic and political system the basic characteristics of which are very different from those under which we now live. Rigorously controlled systems cause a loss of basic freedoms, and they have proved seriously deficient on grounds of economic efficiency as it reflects itself in the living standards of the population. Which way history will move in this regard remains an open question, and it is the most dramatic question posed by the present difficulties.

The possibility remains of trying to attain a steadily rising general price trend to which the other economic variables adjust. Not to allow such a trend to steepen would require the same effort—the same resistance to temptation—as would have been required for keeping to the near-zero inflation path of the 1952–65 period. It could be argued that once we are in the two-digit range a greater effort is needed for gradually reducing inflation to negligible size than for achieving a much less ambitious long-run objective, such as that of a significant but nonaccelerating inflation rate. Yet this would be an unconvincing argument because no policy directed at a steady price trend can be successful unless it is credible to the

public, and the more policy makers adjust their initial objectives to the upward deviations that have occurred in the past the less credible they become in their promise not to accommodate accelerating inflation in the future.

PERIODS OF PRICE INSTABILITY

Since 1929 the United States has experienced several periods of substantial price instability as measured by such general price measures as the gross national product (GNP) price deflator or the consumer price index (CPI). During the Great Depression of the early 1930's prices fell sharply, declining by more than 20 percent from 1929 to 1933 (Table 37). Price increases of a similar magnitude occurred following the outbreak of World War II in Europe, before wartime price controls took effect. Prices rose even faster on the average in 1946, 1947, and 1948, after these controls had been lifted. The outbreak of the Korean war in 1950 also brought a brief but significant price spurt. The largest year-to-year price increase since 1947 occurred in 1974, when the GNP deflator rose 10.2 percent over its 1973 level and the CPI rose 11.0 percent. This happened after inflationary antecedents that started developing about 1965.

TABLE 37.—*Changes in the GNP implicit price deflator and the consumer price index, 1930–74*

Year	Percent change from preceding year		Year	Percent change from preceding year	
	GNP implicit price deflator	Consumer price index		GNP implicit price deflator	Consumer price index
1930	−2.7	−2.5	1955	1.4	−.4
1931	−9.1	−8.8	1956	3.4	1.5
1932	−10.1	−10.3	1957	3.7	3.6
1933	−2.4	−5.1	1958	2.5	2.7
1934	7.3	3.4	1959	1.7	.8
1935	1.1	2.5	1960	1.6	1.6
1936	.3	1.0	1961	1.3	1.0
1937	4.1	3.6	1962	1.1	1.1
1938	−1.4	−1.0	1963	1.3	1.2
1939	−1.5	−1.4	1964	1.6	1.3
1940	1.5	1.0	1965	1.8	1.7
1941	7.7	5.0	1966	2.8	2.9
1942	12.3	10.7	1967	3.2	2.9
1943	7.2	6.1	1968	4.0	4.2
1944	2.3	1.7	1969	4.8	5.4
1945	2.6	2.3	1970	5.5	5.9
1946	11.8	8.5	1971	4.5	4.3
1947	11.9	14.4	1972	3.4	3.3
1948	6.6	7.8	1973	5.6	6.2
1949	−.6	−1.0	1974	10.2	11.0
1950	1.3	1.0			
1951	6.8	7.9			
1952	2.1	2.2			
1953	1.0	.8			
1954	1.5	.5			

Sources: Department of Commerce (Bureau of Economic Analysis) and Department of Labor (Bureau of Labor Statistics)

The 1965–74 inflation, taken as a whole, also reflects the consequences of too rapid an expansion of aggregate demand. However, at least two further considerations are relevant to the explanation of why inflation continued in

years like 1970 and 1974 after policy restraint had been applied. One is that such interludes clearly demonstrate the difficulty which policy makers encounter in trying to reduce the rate of inflation after the preceding inflationary trend and its expected continuation have entered into cost trends. But the experience of 1974 also shows something else that had already been observed in 1973. If forces operating from the supply side significantly raise the prices of specific raw materials and of products of industries with capacity shortages, then even if policies of restraint are applied to prevent a permanent steepening of the general price trend, the specific price increases will show nevertheless for a while in the behavior of the general price level.

These difficulties become greater the longer the preceding inflationary development has lasted and the more the public suspects that the same political considerations which induced governments to engage in inflationary practices in the past will lead them in the future to retreat from a policy of restraint prematurely.

EXCESSIVE GROWTH IN AGGREGATE DEMAND, 1965–74

Economic theory suggests that many factors, domestic and foreign, private and governmental, can affect aggregate demand. The two that receive most attention, however, are monetary and fiscal policy actions. Fiscal policy can stimulate consumption and investment demand through tax cuts and by increases in government expenditures. Even if the growth rate of the money supply remained at a level which would be consistent with noninflationary growth at given fiscal receipts and expenditures, an increased fiscal deficit could bring about price inflation. Interest rates would be raised and the cost of holding currency and demand deposits would be increased. For this reason the public would wish to decrease its average money holdings in relation to its expenditures, and total expenditures could increase beyond the noninflationary rate.

Yet price inflation caused by deficits with unchanging money supply would be of limited significance. Rapid and sustained inflation requires a continual inflationary increase of the supply of money. The main reason why expansionary fiscal operations are among the factors generating sustained inflation is that when fiscal deficits are large the monetary authorities, in an attempt to offset the interest rate and credit availability effects of large increases in government debt, tend rapidly to increase their security holdings and hence to inject new money into the economy. Thus expansionary fiscal policies are often accompanied by expansionary monetary policies, with a correspondingly rapid growth of aggregate demand even at high levels of resource utilization.

Of course, rapid increases in aggregate demand are not always inflationary. When aggregate demand increases by the same amount as real aggregate supply, markets can clear at the current price level. Although many individual prices may move up or down, these changes tend to balance out, leaving the general price level unchanged. Sometimes, however, aggregate demand and

supply do not mesh, and if they are not brought into balance at given prices, then the price level will move. The maximum feasible growth of the supply of goods and services over any period is limited by the existing quantity of labor, capital, and natural resources, and by the rate at which new physical and human capital and new knowledge can be acquired. The increase in demand depends on demand management policies and is subject to no such limits. Over the past 10 years the effect of technological progress and the growth in the quality and size of the labor force and of the capital stock have been such as to raise potential output on the average by 4 percent a year in constant dollars. Hence whenever at high levels of resource utilization aggregate demand grows by more than an annual rate of 4 percent, the faster growth of demand must be reconciled with the slower growth of real supply through the process of inflation.

During the period from 1965 to 1973, for example, real output grew by 36 percent, or at a compound annual rate of about 4 percent. Largely as the result of expansionary policies, however, aggregate demand in money terms grew by 89 percent, or at a compound annual rate of 8 percent. Hence prices had to rise by about 4 percent a year on the average to make the 8 percent growth in aggregate expenditures consistent with the 4 percent growth in real output. By 1973 the rate of increase in the price level had become much larger than the average during the 8 years, and in 1974 inflation had moved into the two-digit range, as special factors reinforced a strong underlying trend.

Any explanation of inflation must therefore come to grips with the questions of why, about 1965, aggregate demand started to grow so much faster in nominal terms than real output, and why it has continued to grow at a faster rate subsequently.

The observed steep rise of aggregate expenditures could not have taken place had monetary aggregates not grown very rapidly after 1965. While there are no hard and fast rules to define excessive versus noninflationary growth rates in monetary aggregates, recent experience does provide some guidelines. The periods of rapidly rising prices have been periods in which M_1 (currency plus demand deposits) and M_2 (M_1 plus time deposits except large certificates of deposit) grew at high average yearly rates.

Over a limited period, which until now has lasted about 12 years, aggregate demand as measured by the money GNP has tended to grow in the same proportion as M_2, although short-run deviations from this relationship have occasionally been very large. This suggests that a rate of growth in M_2 of about 5 to 6 percent over the 1965–74 period would have been consistent with a rate of growth in aggregate demand of about the same magnitude. Further, if real supply over the 1965–74 period had grown at its long-run annual average of about 4 percent, then the price level would have risen very little. In fact, from 1965 to 1970, M_2 increased at an average yearly rate of more than 7 percent, and from 1970 to 1974 it increased at a rate of about 10 percent. Given our economy's inability to sustain a real

growth rate of more than about 4 percent, the rapid rates of growth of the money aggregates since 1965 were not consistent with reasonably stable prices.

Other countries have also experienced a recent acceleration in money and in prices, as shown in Table 38. However, the rates of monetary expansion that are consistent with the mild price increases of the 1960's and with the much more rapid inflation of the 1970's will vary from country to country. One reason for this is that the money supply is not defined the same way in the various countries. Another reason is that the countries differ in the types and quantities of other liquid assets which the public holds along with its stock of money. Also, trends in velocity differ across countries. But what probably matters most is that in rapidly growing economies, such as those of Japan or Germany, a relatively large proportion of a given increase in aggregate demand has been satisfied by increases in real goods and services. The same rate of growth in money and expenditures in less rapidly growing countries, such as the United Kingdom or the United States, would lead to higher rates of inflation. Generally the range of money growth rates that is consistent with stable prices will be different in each country. The central conclusion remains, however, that when money growth rates proceed at a rate far exceeding that with which output could keep pace, the price level too will rise sharply.

Considering that our monetary authority, the Federal Reserve System, creates the quantity of reserves which is a basic determinant of how much money can be created in addition to hand-to-hand currency, one is led to ask why the regulation of the money supply has not prevented these undesirable price trends.

We may begin by recognizing that the rate of monetary expansion is influenced by several factors which result in a rather flexible relation

TABLE 38.—*Growth rates of consumer prices and money stock for the United States and five other developed countries, 1965–74*

[Percent change; annual rate]

Country	Consumer prices		Money stock [1]			
	1965 to 1970	1970 to 1974 [2]	1965 to 1970 [3]		1970 to 1974 [3]	
			M_1	M_2	M_1	M_2
United States	4.2	6.0	5.2	7.1	5.9	9.8
Canada	3.8	6.4	8.1	10.6	19.7	16.8
France	4.4	8.0	5.3	10.8	[4] 12.1	[4] 17.1
Germany	2.4	6.2	6.4	12.7	9.2	14.4
Italy	3.0	9.5	15.8	13.7	21.9	21.5
Japan	5.4	11.0	[5] 16.2	[5] 16.5	24.4	22.2

[1] M_1 = "Money" and M_2 = "Money" plus "Quasi-Money" as they appear for each foreign country in International Financial Statistics, International Monetary Fund. These data are roughly equivalent in all countries.

[2] Change from June 1970 to June 1974.

[3] Based on average of end-of-month figures; average of first 6 months for 1974 and 12-month average for other years (except for the United States, which are based on averages of daily figures for December 1965 and 1970 and June 1974).

[4] Change from 1970 to 1973.

[5] Change from 1966 to 1970.

Sources: Department of Labor (Bureau of Labor Statistics), Board of Governors of the Federal Reserve System, and International Monetary Fund (International Financial Statistics).

between the variables under the control of the Federal Reserve and the money aggregates themselves. This is so, quite aside from the fact that approximately 25 percent of total demand and time deposits are held in banks that are not members of the Federal Reserve System. For example, the public may decide to hold less currency relative to total deposits, as has been the case during most of the period with which we are concerned, or it may move in the opposite direction as it has since December 1973. When people exchange currency for deposits at their banks, the banks gain reserves, and the converse is true in the contrary case. Increased reserves can be and usually are used to expand loans and investments and hence deposits, thus generating increases in M_1 and M_2.

Another factor is that banks need to hold reserves also for purposes other than incurring those types of deposit liability which economists have found most useful to include in the concept of money. The public's increasing preference for interest-bearing assets led to a very rapid increase of the volume of large-denomination certificates of deposit which are not defined as "money" but are nevertheless subject to reserve requirements. In addition, the deposits held by the Treasury are also subject to reserve requirements, though they are not "money." Moreover a given quantity of reserves supports more money in the sense of M_2 if that aggregate consists to an increasing extent of time deposits, as has been the case in recent years, because reserve requirements are smaller for time deposits than for demand deposits. Finally, given the legally required minimum reserve ratios, banks find it convenient to hold more reserves per dollar of deposits during some periods than in others. For these and other reasons a given amount of total reserves will correspond to a different amount of total deposits in different periods of time. The money supply corresponding to any particular amount of reserve creation by the Federal Reserve is not precisely predictable.

Nevertheless, the long-run growth in monetary aggregates is determined largely by the rate at which the monetary authority injects "high-powered money," defined as the sum of total reserves and currency, into the system. The Federal Reserve can inject high-powered money into the banking system by acquiring Treasury securities from banks or from other businesses or individuals, or by making advances to banks, or by discounting eligible securities, although other factors too can affect the growth rates in this policy-controlled aggregate.

High-powered money grew at a 3.9 percent annual rate from 1960 to 1965, at 5.0 from 1965 to 1970, and at a 7.7 percent rate from 1970 to 1974. This acceleration reflects itself in those of M_1 and M_2, although M_2 has grown faster than M_1.

The question therefore remains why the Federal Reserve System did not prevent this sustained period of steepening inflation.

A reason mentioned earlier is the relationship between monetary and fiscal policies. Large fiscal deficits express themselves in large fiscal borrowing, and they are apt to squeeze out a good deal of private borrowing

unless the actions of the monetary authority speed the growth of the money supply. Yet if the supply of resources is not sufficiently elastic, such accommodation by the monetary authority will lead subsequently to the inflationary difficulties discussed in this chapter.

In most years since 1965 Federal Government borrowings have been substantial. Government expenditures rose steeply after 1965 as a result of the costs of the Vietnam war and of greatly expanded social welfare programs. In the 4 fiscal years from 1965 to 1969, defense outlays increased by $31.6 billion (64 percent) and nondefense outlays by $34.5 billion (50 percent), while money GNP increased $243.4 billion (37 percent). In the following 5 fiscal years, from 1969 to 1974, money GNP rose by 50 percent and Government outlays by 45 percent, with defense outlays remaining unchanged but nondefense outlays, prominently including transfer payments, rising by about 84 percent. Resources were fully, if not "overfully," used in the 1965–69 period, during which the large increase in Government spending was already associated with a substantial increase in Government debt. The unified budget deficit, which is the deficit concept that comes closest to showing the net financing needs of the Treasury, reached $25 billion in fiscal 1968 and $23 billion in fiscal 1971 and 1972; it was also of appreciable size in other years since 1965. Much of the resulting debt was financed by the Federal Reserve so that monetary policy was expansionary enough not to force a reduction of other money expenditures to offset increased Government spending. The results were overrapid expansion in total expenditures and a significant rise in the general price level.

Deficits, however, represent only part of the total borrowing operations involving the Federal Government. In recent years, the rapid growth in the borrowings of federally sponsored credit agencies greatly added to the Government-induced financing pressures on credit markets, even though a large part of the funds thus raised was lent again to borrowers whose demand for credit would otherwise have been satisfied by private lenders. Outstanding agency borrowing increased by $3.5 billion in calendar 1968, when total funds raised by nonfinancial sectors amounted to $95.9 billion, but this net borrowing jumped to $19.6 billion in 1973 when the budget deficit was $8 billion and total funds raised by nonfinancial sectors amounted to $187.4 billion. Partly to avoid a tightening of the market to other borrowers, the Federal Reserve System bought Government securities and thereby monetized Federal debt in response to Federal financing pressures. Given the inflationary consequences of such a policy, it could bring only temporary relief because the steepening of inflationary expectations tightened the markets again by increasing the demand for credit relative to the supply.

Another important reason for the high average rates of monetary expansion during the past 10 years was the effort of policy makers to play safe against recessions or at least to postpone them and to promote a very rapid rate of cyclical expansion in the advanced stages of the recovery after the

recession of 1970. In an attempt to achieve these objectives, money growth rates were allowed to climb farther and farther above their noninflationary ranges.

These growth rates, however, did not increase steadily. On three occasions policy actions contributed to substantial slowdowns in money expansion. Each such action attempted to deal with the worsening inflation, first and most briefly in 1966–67, then in 1969–70, and most recently in 1973–74. The first two periods of tightening were soon followed, however, by reversals in policy that led to substantially higher rates of money growth than those preceding the slowdowns and hence carried us even further above noninflationary growth rates in money aggregates. The pressures on the monetary authority to return to policies of rapid expansion were strong in 1966 and in the recession of 1970, and they became increasingly strong again recently. These are pressures to "validate" the already observable rate of inflation by a policy that would lead to the expectation that on the next occasion an even higher inflation rate will be validated.

Yet, showing substantially increased resistance against these pressures, Federal Reserve policy has moderated monetary growth in 1974. From December 1973 to December 1974 the increase in the narrowly defined money supply, M_1, was kept to about 4.5 percent, and the increase in the broadly defined money supply, M_2, to about 7.3 percent, that is, to 1.6 percentage points less than the year before for both, and to 4.2 and 3.8 percentage points less than during 1972. Indeed, the steeper price trend of 1974 has turned the 1974 increase in the nominal money supply into a decline in real balances. Even though the prospective money growth rates of the near future are somewhat higher, this policy reflects determination to accommodate growth of output only as the inflation rate declines. As for fiscal policy, even the actual budget deficit remained small for the fiscal year 1974, though it was larger for calendar 1974; in view of the rise of the unemployment rate from about 5 percent to over 7 percent during the calendar year, the same fiscal policy would have produced a large surplus at high levels of employment (see Chapter 2).

THE UNSTABLE TRADEOFF

By the time the inflation problem became acute in most Western countries, the conviction had spread both within and outside the Government that a tradeoff between inflation and unemployment—the so-called Phillips tradeoff—was of considerable importance. A stable downward-sloping "Phillips curve" with rates of price or wage inflation plotted against the unemployment rate was often used to illustrate this thinking. Policy makers were supposed to have a choice as to how much inflation they would accept for achieving low unemployment rates. As discussed in Chapter 3, the shortcomings of such simple presentations were soon recognized. For instance, it was pointed out that, in view of changes in the composition of the labor

force, more refined measures than the official unemployment rate are needed for measuring the tightness of the labor market. It was suggested also that allowances need to be made for the role of further variables and of lags. The analysis would then show that a given increase in appropriately defined labor market tightness, if maintained, will gradually lead to a stable, though higher inflation rate to which the other economic variables could adjust. However, the ideas underlying the work of researchers who have suggested this conclusion are not easily reconciled with each other.

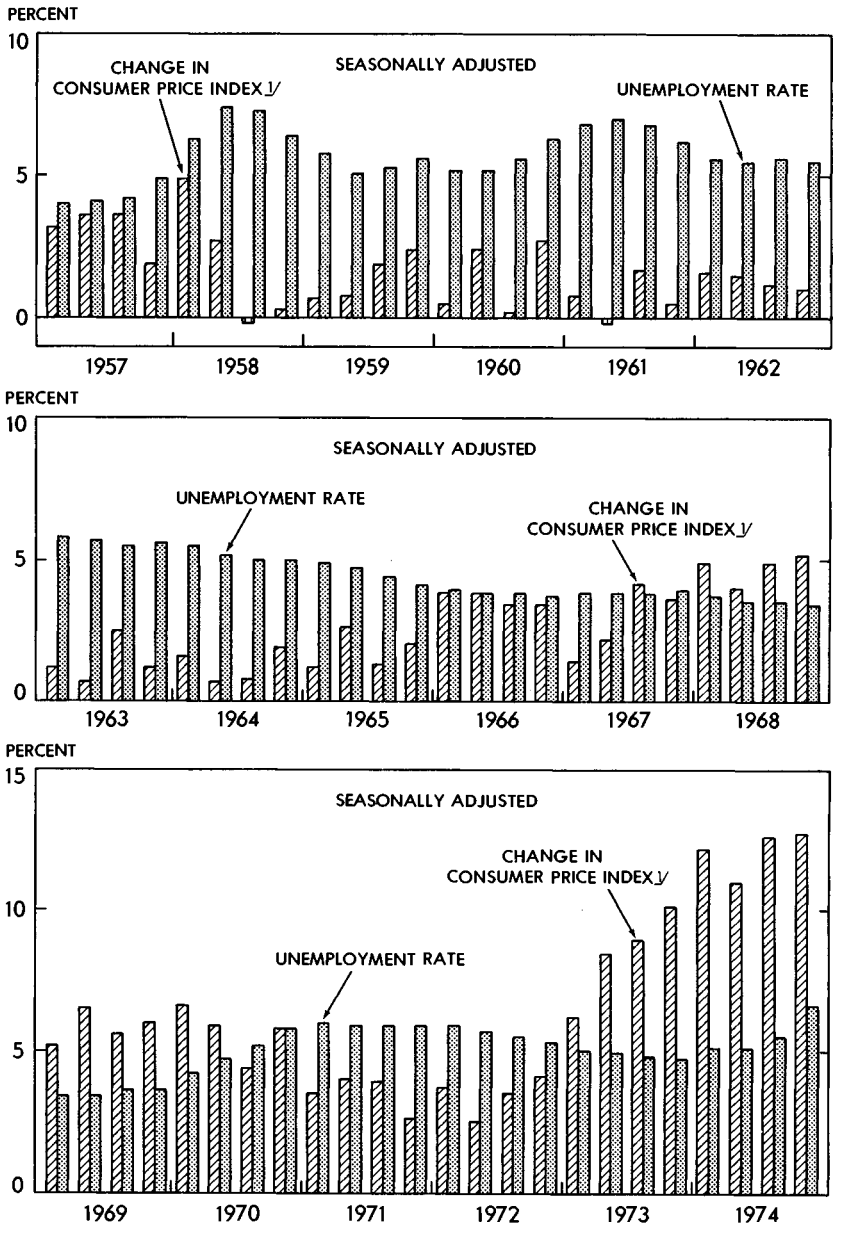
While econometric work on this question has yielded valuable by-products, the results remain far too inconclusive to serve as a basis for policy. There comes a point at which there is reason to return to the direct observation of simple facts, and what these show is that in the period following 1965 the relation between inflation and unemployment has been distinctly unstable. As can be seen from Chart 8, when similar unemployment rates recur, they tend to be accompanied by appreciably higher inflation rates.

When statistical testing of econometric models leads to inconclusive results, there is all the more reason to reexamine the basic logical underpinnings of the hypotheses. No convincing case can be made for the hypothesis that if inflation were fully anticipated, a higher anticipated rate of inflation to which all variables have adjusted would stimulate a higher level of activity and thus more employment than a lower rate. Inflationary policies can drive the actual rate of price increase temporarily above the expected rate so that greater real income gains are anticipated than will in fact be forthcoming. It is this unrealistic expectation of higher real incomes that results in an increased level of activity, thus giving rise to a Phillips tradeoff between inflation and unemployment in the short run. But such a tradeoff will be unstable when the expected rate of inflation is rising, so that a stimulative policy can be maintained only by allowing the actual rate of inflation to increase further. If the process were allowed to proceed far enough, price acceleration might even become associated with rising unemployment. This could happen because by then inflationary expectations would be rising even more rapidly than actual inflation, or because the uncertainties surrounding the decision-making processes in markets would reduce economic activity.

Since the tradeoff between unemployment and inflation lacks stability, trying to base policy on it compels one eventually to face the fact that the true choices or tradeoffs are of a different kind. In the first place, before the resulting process of accelerating inflation approaches its limits in a state of so-called hyperinflation, there is always a choice between accepting the difficulties of adjustments "now" or moving toward even greater future difficulties. Secondly, after an extended inflationary span there is a choice between facing the lag between output and price response or engineering a transition into a "controlled" system, the deficiencies of which are very severe even if the symptoms are different.

Chart 8

Inflation and the Unemployment Rate



1/ CHANGE FROM PRECEDING QUARTER AT AN ANNUAL RATE.

SOURCE: DEPARTMENT OF LABOR.

SPECIAL FACTORS AND THE LAGGED PRICE RESPONSE

There are a number of possible explanations for the unusual degree of the acceleration of price inflation during 1973, when after the first quarter the rate of increase of output was declining significantly, and during 1974 when output itself was declining. The termination of wage and price controls on April 30, 1974, needs to be mentioned even though opinions differ concerning the significance of decontrol for price acceleration. Controls had been imposed on a wide range of wages and prices in August 1971; they gradually came to operate against the increasing pressure of market forces, and they caused an increasing amount of distortion before being phased out. Wages and prices bulged to some extent in the month immediately after controls ended. The controls and their removal had an effect on the timing of price increases.

By the spring of 1973 another type of price fixing—the fixing of exchange rates in the currency markets—had been abandoned as most of the major trading countries had switched from fixed exchange rates to managed floating. This led to the depreciation of the dollar against most major currencies, continuing with some interruptions until July 1973. As American goods and services became more competitive in the world markets, the net exports of the United States increased by almost $10 billion from 1972 to 1973. From the first of these years to the second, net exports turned from significantly negative to significantly positive, and remained very high through the first quarter of 1974, after which the consequences of the oil price increase started to show. While an increase in net exports tends to raise real GNP when resources are underutilized, it lowers the domestic availability of goods when resources are already approximately fully utilized, as they were through much of 1973, or if there exist shortages in specific areas of the economy, as was the case through part of 1974. For this reason, an increase in net exports has contributed to inflation.

Important special factors in the recent inflation were the unanticipated decision of the Arab countries to place an embargo on crude oil exports to the United States and the decision of the Organization of Petroleum Exporting Countries (OPEC) steeply to increase the price of oil. The precipitous increase of foreign crude oil prices during the year, similar price movement of "new," "released," and "stripper" domestic crude oil (which by October 1974 jointly accounted for 34 percent of U.S. domestic production), and the concurrent increase in the prices of other energy materials had a substantial cost-raising impact in 1974. Until the spring, crude material prices other than crude foodstuffs and feeds also continued to rise steeply. Large price increases in a number of important intermediate products continued even longer as capacity shortages persisted until midyear and inventory demand remained strong. Such industries as primary metals, chemicals, stone, clay and glass, and paper provide prominent illustrations of these specific shortages.

After increasing sharply in 1973, farm product prices behaved erratically during 1974. On the whole, however, the price-raising effect of shortages originating in specific sectors played a role in 1974 as well as in the preceding year. This statement must be understood in the context of the lag problem more generally discussed before. Even if a monetary and fiscal policy does not provide for a permanent speeding up of the general price trend, it will not prevent a temporary rise in general price indexes when raw material prices rise sharply.

The problem of lags has become more troublesome than it had been in earlier periods. The available data suggest that, particularly since 1965, prices and wages have responded less quickly to declining demand in the product and labor markets. For instance, Table 39 points in this direction by showing various rates of change, including changes in compensation per man-hour and in the private nonfarm deflator, for 4-quarter periods before and after cyclical peaks. Both compensation and the deflator show more resistance to moderating cyclical forces after the downturn in recent cycles than in earlier ones. Admittedly this statement is based on a rigid definition

TABLE 39.—*Comparisons of behavior of selected variables before and after cyclical peaks, 1947–74*

Period	Cyclical peak [1]	Percent change to or from peak					Civilian unemployment rate [3] (percent)
		Private nonfarm economy [2]		GNP implicit price deflator		Real GNP	
		Output per man-hour	Compensation per man-hour	Private nonfarm	Farm		
Four-quarter change:							
Before peak	1948 IV	2.8	8.0	5.8	−16.8	4.5	3.8
After peak		3.1	.4	−1.2	−13.8	−1.6	7.0
Difference [4]		.3	−7.6	−7.0	3.0	−6.1	3.2
Before peak	1953 II	3.5	6.0	2.3	−14.4	6.9	2.6
After peak		1.5	3.3	1.8	−3.5	−3.4	5.8
Difference		−2.0	−2.7	−.5	10.9	−10.3	3.2
Before peak	1957 III	2.8	5.4	3.5	2.3	2.4	4.2
After peak		3.0	3.8	1.4	6.2	−1.0	7.3
Difference		.2	−1.6	−2.1	3.9	−3.4	3.1
Before peak	1960 II	.7	4.3	1.6	−1.7	2.0	5.2
After peak		2.7	3.0	1.0	−1.3	.6	7.0
Difference		2.0	−1.3	−.6	.4	−1.4	1.8
Before peak	1969 IV	−1.1	6.7	4.8	10.4	1.2	3.6
After peak [5]		2.5	7.4	5.8	−7.8	.4	6.0
Difference		3.6	.7	1.0	−18.2	−.8	2.4
Before peak	1973 IV [6]	.4	8.0	5.9	54.8	3.9	4.7
After peak [7]		−3.6	9.7	13.7	−11.1	−5.0	6.6
Difference [7]		−4.0	1.7	7.8	−65.9	−8.9	1.9

[1] Quarter designated as cyclical peak by National Bureau of Economic Research (NBER), except as noted.
[2] All persons.
[3] Rate for peak quarter and 4 quarters after peak.
[4] All differences in this table are changes 4 quarters after peak minus changes 4 quarters before peak.
[5] Change from 1969 IV to average of 1970 IV and 1971 I to smooth effect of auto strike.
[6] Peak quarter of real GNP used as NBER has not yet designated this quarter as a cyclical peak.
[7] Preliminary.

Sources: Department of Commerce (Bureau of Economic Analysis), Department of Labor (Bureau of Labor Statistics), and National Bureau of Economic Research.

of the time periods used for comparison and is so aggregative as to preclude consideration of special developments in various sectors of the economy. Nor does it take into account economic developments subsequent to the year following a peak or preceding the year leading up to the peak. Still this and other evidence points to less prompt deceleration of prices and wages in recent downturns.

As mentioned before, some of the increasing downward rigidities of the wage and price trends have resulted from the firming up of inflationary expectations. Past developments as well as observable political pressures may have made it more difficult even for the most determined policy makers to establish the credibility of their anti-inflationary policies.

By late 1974 various components of the wholesale price index started to signal impending general price deceleration, and so did some other measures of general price change, such as the fixed-weight GNP deflator. Even the present money wage trend is compatible with a reduction of the current rate of general price increase, though not to a level that could be considered acceptable. On the other hand, in the weakened commodity and labor markets of the near future, with the unemployment rate expected to rise to above 7.5 percent, price deceleration is very likely in time to result in wage deceleration with a feedback on prices. Still, after an unusually protracted period of inflation, the lags between the effect of restrictive policies on output and the desired effect on prices will prove to be long.

INDEXATION AND THE TAX STRUCTURE

The length of these lags has awakened interest in suitable mechanisms that can take into account the inevitable gradualness of the unwinding process, without preventing or even markedly slowing the process of unwinding the inflation. Opinions differ on whether "indexing" the commitments involving future payments of fixed dollar amounts meets these requirements. When such commitments are indexed, they are expressed in constant rather than in current dollars; that is, the amounts paid at a later date are adjusted for changes in a general price index.

Recently the question of formal indexation in this sense has attracted considerable attention. There is wide agreement that truly comprehensive indexing is not feasible immediately. A major obstacle is that many current-dollar payment obligations have been incurred in past periods. Furthermore, individuals can hardly be forced to index their future contracts if, instead of relying on some index number formula, they wish to make other allowances for the price movements they expect. But one has good reason to believe that during the phase of unwinding an inflation the automatic response of indexed wages to price deceleration, and the feedback of that response on prices, would indeed be helpful, since there would be no need to anticipate the future course of inflation to obtain the desired real wage bargain. On the other hand, the view has been expressed that in past phases of accelerating inflation such automatic responses would have further steep-

563-280 O - 75 - 10

ened the inflation rate and that they also might be damaging in future phases of inflationary processes.

The expectation of rising prices can be reflected in allowances made in current-dollar contracts as well as through formal indexation of contracts. At present, however, a spreading of the practice of formal indexation is evident. In spite of the significant shortcomings of all available index numbers that may be selected for indexing payments, many parties to wage and other contracts rely on indexing instead of merely on current-dollar allowances for presumptive price movements. Various payment obligations of the Government, such as social security benefits and food stamps, are also indexed. Furthermore, automatic adjustments over the term of a contract are sometimes tied not to a price index but to some economic variable tending to move in the same direction as price expectations. For loan contracts the Treasury bill rate or the prime rates of banks have been used as such variables. These rates are influenced by inflation not because of indexation but because inflation expectations are among the factors determining their levels.

However, given present regulations, not all interest rates are allowed to move freely, nor can some interest rates be tied to other rates which would reflect market forces. This is illustrated by regulations applying to savings accounts. Thrift institutions characteristically lend long, mainly by acquiring mortgages at fixed interest rates, and they borrow short, mainly from small savers. The average mortgage in the portfolio of these institutions is several years old and was originated at a time when the rate of inflation, and hence money rates of interest, were lower. As interest rates rose in the free market, interest rate ceilings were maintained on the deposits of the thrift institutions, and also on the conventional time deposits of commercial banks, in an attempt to prevent a sharp squeeze on the thrift institutions, resulting from higher borrowing than lending rates.

One of the highly undesirable consequences of these regulations is that the small saver, to whom other outlets are rarely available, earns interest at an artificially reduced rate that is far below the current rate of inflation, and is grossly unrealistic by the standards of the markets for short-term instruments in general. When securities are issued in the money market on conditions attractive to small savers and at interest that would adjust to future rates of inflation, the thrift institutions and homebuilders feel threatened. Policy makers are strongly influenced by this resistance. The Administration's proposals for financial reform would gradually change (essentially diversify) the type of operations in which the thrift institutions are engaged and would gradually eliminate the interest rate ceilings on deposits. Until interest rate ceilings are removed, the present regulations remain disadvantageous to small savers.

Not even those savers and managers of funds who are able to make use of the facilities of major financial markets have been receiving interest at a rate which compensates for inflation and yields the kind of real rate of interest

that obtained in the past. However, for short rates this reflects either an underestimate of inflation or the low and uncertain real return on investment corresponding to the present business outlook, or some combination of these. For long rates it may also reflect the expectation that inflation will decrease in the future. The rates at which business borrows from banks are now often made to vary with the prime rate over the term of the loan. While, as was noted, this does not change the loan into one made in "constant dollars"—it is not indexation in the proper sense—the objectives which such arrangements attempt to achieve are similar to those of indexation.

Tax payments to the Government do not adjust for inflation under current tax laws. If during an inflationary period the definition of taxable income is unchanged in nominal terms, individuals move from tax exempt into taxable brackets, and from lower into higher tax brackets, merely because their money incomes are rising, though their real incomes are rising much less or may even be declining. In addition, capital gains computed in terms of money enter into the tax base, even though such nominal gains can represent very much smaller real gains, or possibly real losses. Such distortions call for adjustments, only a few of which have so far been undertaken, and even these are likely to become inadequate before inflation can be reduced to a negligible size.

The effect of inflation on the real Federal tax and nontax receipts from persons, predominantly Federal income taxes, can be shown as follows. From 1973 to 1974 personal income minus transfer payments rose by 8 percent, 3 percent less than the rise in the personal consumption expenditures deflator. Total real adjusted gross income reported on tax returns probably declined as well. Nevertheless Federal personal tax and nontax receipts rose by 15 percent, suggesting that the elasticity of Federal receipts from persons with respect to inflation is at least 1.6 in the aggregate. For individual returns it may in fact be even larger, considering that as more returns are filed, income reported per return rises less than total adjusted gross income. In any event, inflation raises personal taxes by a much larger percentage than nominal incomes, causing the average tax rate to rise and tax payments to increase in real terms.

While itemized deductions claimed on tax returns reflect price increases, individual exemptions and the low-income allowance and standard deduction limits have not been raised in nominal terms since 1972. Thus the tax-raising effect is strongest for low- and moderate-income taxpayers not itemizing deductions, as shown by the following example. Assume that consumer prices and a family's adjusted gross income both rise by 30 percent from 1972 to 1975, leaving their real income unchanged, and further assume that this is a family of four filing a joint return for an income that in 1972 was $10,000. In 1972 this family would have paid Federal income taxes of $905, while at current tax rates it would pay $1,391 on $13,000 of income in 1975. Its average tax rate would rise from 9.1 to 10.7 percent of adjusted

gross income because 30 percent inflation would cause tax liabilities to jump by 54 percent in this illustration. Stated differently, while the real before-tax income of this hypothetical family remains unchanged, its real after-tax income declines by almost 2 percent in 3 years. Thus, the effect of inflation on individual income taxes under existing tax schedules is to increase average tax rates or to increase the Government's share of personal income.

Similar problems have developed in the corporate sector. Here two types of inflationary tax-raising effects had reached considerable magnitudes by 1973. Both arise from standard accounting methods for computing business costs and profits. These accounting procedures understate costs, and hence overstate profits, except if we include in the concept of profits an inflationary period's capital gains, computed in terms of money, which are locked in for going enterprises as these need to replace their inventories and fixed capital at higher prices. Such capital revaluations *are* included in the concept of taxable profits, unless they are reflected in higher taxable interest payments to creditors.

Consider first the method of accounting for the value of inventories in the cost of goods sold. As was explained in Chapter 2, FIFO, the first in, first out method, includes in the tax base the kind of locked-in capital gain which was described in the preceding paragraph and is reflected in the rising valuation of the inventories held by the enterprise. Another accounting procedure, LIFO, or last in, first out, values an item taken from inventory at the price of the last unit added to the inventory, thus more accurately reflecting the prices at which replacement takes place.

While firms have a choice between using FIFO and LIFO and many are switching to LIFO, they are required to value their plant and equipment for tax purposes on the basis of the historical cost of acquisition rather than at replacement cost. In inflationary periods this has consequences of the same kind as the FIFO method of valuing inventories, assuming the service-life guidelines and depreciation rules currently used are correct. If straight-line depreciation is arbitrarily taken to reflect the actual depreciation processes, then accelerated depreciation gives firms tax advantages. However, Table 40

TABLE 40.—*Profits of nonfinancial corporations,*[1] *selected periods, 1965–73*

[Billions of dollars]

Item	1965	1965–69 average	1973
After reported depreciation charges based on historical costs:			
1. Profits before taxes, before inventory valuation adjustment (IVA)	65.3	68.1	95.1
2. Profits before taxes and after IVA	63.6	65.5	77.5
After straight line replacement-cost depreciation involving 85 percent of Bulletin F service lives and "current price (2)" valuation:[2]			
3. Profits before taxes and after IVA	65.8	66.8	73.4
4. Profits after taxes[3]	38.4	36.3	32.9

[1] Excludes profits originating in rest of world and profits on residential properties owned by nonfinancial corporations
[2] Eliminates the difference between "current price (2)" replacement-cost and historical-cost depreciation.
[3] Profits before taxes and after IVA minus tax liabilities.

Source: Department of Commerce, Bureau of Economic Analysis.

suggests that this advantage has by now been significantly outweighed by the disadvantages of having to compute depreciation allowances on the basis of historical costs, and thus of prices at which plant and equipment cannot be replaced.

Aggregate taxable book profits as well as aggregate profits adjusted for the two inflationary effects mentioned above are presented in Table 40. After eliminating the understatements of replacement costs that result from inflation, the before-tax profit trend (row 3) is, of course, very different from the unadjusted book-profit trend (row 1), and this for a capital stock that rose substantially from 1965 to 1973. This contributes a good deal to the understanding of the rising indebtedness of the corporate sector, the accounts of which include in net corporate savings large amounts that are unavailable for investment in any sense other than that of replacing inventories and fixed capital at inflated prices. The point to be mainly stressed in the present context is, however, that once the adjustments are made for inflated replacement prices (as they are both in row 3 and row 4) a comparison of the trend in before-tax profits (row 3) with the trend in after-tax profits (row 4) shows the consequences of allowing the difference between past prices and the prices at which replacement takes place to boost taxable profits. Taxes are levied on the unadjusted book profits, and these have risen much faster than the adjusted profits. As we move forward in time, the figures in row 4 are becoming considerably smaller in relation to the figures in row 3. Preliminary data for 1974 suggest that this trend has continued to the present.

Thus, individuals and corporations alike are now exposed to substantial and haphazard tax-raising effects produced by inflation, even during a period of falling real incomes. One manifestation of this is that while in earlier recessions the temporary reduction of tax revenues in relation to Government expenditures provided a cyclical cushioning effect even without changes in tax schedules, this effect now is forcefully counteracted by the disproportionate tax-raising effect of inflation. In this regard and in others, adjustments in tax laws will be called for during the gradual process of price deceleration toward which we are heading.

Along these lines a strong case can be made for adopting statutory tax reductions during the present recession. Yet in view of the recently increased dependence of business and also of households on borrowed funds, the financing of large recession deficits might after a while create more tension in the credit markets than it had created in the past. Given the size of the output stimulus provided by some combination of expansionary monetary and fiscal policies, interest rates decline less to private borrowers during a recession if more of the stimulus results from fiscal policies involving a large increase in the quantity of government securities. This implies greater tightness of the credit markets in the subsequent recovery. Pressures may then be exerted on the monetary authority to try to reduce this tightness and to promote rapid expansion without sufficient regard to price-trend objectives.

The success of our anti-inflationary efforts would in this event depend essentially on the determination to resist these pressures, even if the recovery should proceed less rapidly than would otherwise be desirable.

CHAPTER 5

Government Regulation

UNTIL AFTER THE END OF THE CIVIL WAR, the Federal Government's policy toward the economy involved little or no direct regulation. Although some States experimented with railroad regulation as early as the 1840's, only toward the end of the century did the Federal Government undertake any significant economic regulation. The first steps toward regulation were designed to deal with problems of monopoly. In 1887 the Act to Regulate Commerce set up an Interstate Commerce Commission (ICC) to regulate the railroads, which eventually led to reduced competition throughout the surface transportation sector. In 1890 the Sherman Act outlawed contracts and activities designed to create monopolies in restraint of interstate trade, intending thereby to promote competition. In succeeding years the transportation and antitrust statutes were amended and complemented, and direct economic regulation spread to other industries. There has been a marked trend toward more rather than less governmental regulation, and this trend has been particularly evident in recent years. More requirements have been placed on the private sector, often to achieve objectives such as safety, health, and pollution control which are not included in conventional measures of economic output. The continuation of long-standing regulation as well as the recent proliferation of regulation have raised questions about the efficacy of regulation: in particular, what costs and benefits the various forms of regulation impose in the light of today's economic difficulties.

THE RATIONALE FOR REGULATION

Government regulation of business has been established for a number of reasons, all of which merit continued reexamination. At one extreme is the case of "natural monopoly"—a situation in which economies of scale (that is, falling unit costs with increasing output) are so pervasive that free competition might lead to a single firm in the market, able to exercise monopoly power. An unregulated monopolist may be in a position to charge excessive prices, restrict output, and discriminate among buyers. The cases of such natural monopolies are probably quite limited in the American economy, with certain utility services appearing to be the major exception.

In contrast to monopoly and inadequate competition, regulation is often considered justifiable to prevent excessive or "destructive" competition. One form of the argument is that in markets where there may be a tendency

toward natural monopoly a preferable course would be to avoid the costs of monopoly pricing or of monopoly regulation by maintaining several competitors, even though a perfectly regulated monopolist could provide services at lower cost. Another consideration is that even though competition may be viable it might result in swings in output and prices which some would judge too severe and too costly to consumers and producers. Regulation is thus said to be necessary to maintain stability and protect the equity of firms in the industry.

Another rationale often raised on behalf of regulation is that ill-defined property rights make it necessary for the Government to allocate certain "public" resources in order to prevent their overuse. The airwaves are one example of a scarce resource that would be rendered much less useful without some controls over its use. The environment is another example of a resource where there are conflicting claims on its use and where governments have intervened to allocate resources.

It is also asserted that in some markets the government should intervene between the seller and the consumer in order to protect either, or both, from certain conditions that might emerge in the absence of regulation. Since information is expensive to collect and once collected is "free" but costly to disseminate, the ideal government serves as a surrogate for the well-informed market participant by prohibiting certain transactions. For example, those selling their labor, according to this argument, must be protected from unsafe working conditions by the government's requiring employers to maintain certain safety standards. To protect consumers, it has been made unlawful for a firm in the United States to market certain drugs until they have been approved by the Federal Drug Administration (FDA). Likewise, the Consumer Product Safety Commission is authorized to establish mandatory standards and require the labeling of products which are found to be unsafe.

Government regulation may also serve as a convenient avenue for redistributing income. In regulated "competitive" markets less efficient producers are protected, and in effect are subsidized, by lower-cost producers who would expand their output in the absence of regulation and by consumers who end up paying higher prices and buying less. Rate regulation often leads to rate structures that "cross-subsidize" markets by requiring firms to charge prices that are above their costs in some markets and to use the extra profits to offset losses in more "deserving" markets. For example, telephone rates in any given region often do not differentiate between residential users in urban areas and those in sparsely populated localities where unit costs are usually higher. In transportation, "common-carrier obligations" are often enforced to assure below-cost service to some users, financed by higher prices to other users.

Whatever the rationale for regulation, once established it has a tendency not only to be maintained but to become more rigid with time, even if its economic costs become great and its effects differ from those originally

intended. The uncertainty associated with significant regulatory change can deter needed reform. Also, those who would be adversely affected by regulatory reform often are relatively few and have strong incentives to resist change. On the other hand, those who stand to gain from regulatory reform tend to be numerous (and thus the potential gain per person is relatively small) and seldom well organized; they may be unaware of the potential gains and thus less effective in obtaining reform. For these reasons, it is particularly important to view critically any proposals for increased regulation. It is equally important to look for ways of lessening regulation when the benefits of improved economic performance outweigh any sacrifice of other objectives.

THE FEDERAL ANTITRUST LAWS

Under the antitrust laws the Government is concerned with industry conduct, such as price fixing, and with industry structure which might foster monopoly power. With respect to price fixing, the most difficult problem is detection, and for this purpose antitrust authorities have relied primarily on informants. While industrial concentration is relatively easy to discover, it does not follow that monopoly power exists whenever concentration exceeds some arbitrary level. Each case must be judged on its own merits, and exclusive adherence to a "market share" approach may lead to unnecessary interference with ordinary business activities and to less efficient markets.

In encouraging economic efficiency, the enforcement of the antitrust laws raises obvious problems of balance. On the one hand, it would be possible for a misguided antitrust activity to inhibit innovation and cost-cutting action in the private sector; in this respect antitrust activity could constrain economic efficiency. On the other hand, antitrust activity that promotes competition will encourage resources to be used more efficiently. To further the second result, the Antitrust Division's Economic Policy Office was recently expanded, and the Division's funding for antitrust enforcement was increased.

Until lately the penalties for antitrust violation appear to have been too low. In weighing the costs and benefits of engaging in illegal activities, potential violators take into account the punishment if they are caught as well as the probability of successful prosecution. Increasing the penalty or the probability of apprehension, or both of these, raises the expected cost of illegal activity and should reduce its extent. Recent legislation (Public Law 93–528) substantially raised the penalties for violation and made certain activities felonies rather than misdemeanors. The additional deterrent may have a marked effect. This makes it even more important to allocate enforcement resources efficiently, since ill-defined and badly administered antitrust policies, backed by forceful penalties, might stifle business initiative and otherwise reduce economic efficiency.

The ability of the antitrust laws to improve market efficiency is limited by numerous exemptions. For example, the Miller-Tydings Act (1937) and

the McGuire Act (1952) allow States to establish "fair trade laws," which prevent retail establishments from selling merchandise at lower than manufacturers' suggested retail prices. In those situations, retailers are not allowed to engage in price competition, and consumers must frequently pay higher prices. At present such laws are in effect in States that comprise approximately half the U.S. population. Another example is the Capper-Volstead Act (1922) which exempts agricultural cooperatives from certain provisions of the Federal antitrust laws; among other things, this exemption has given producers greater control over marketing agricultural products. Some of the larger cooperatives may have gone beyond the original intent of the legislation, however, and with the aid of agricultural marketing orders may have been able to maintain certain commodity prices above competitive levels.

Some antitrust powers seem to limit competition rather than promote market efficiency. For example, the Robinson-Patman Act (1936), which limits certain forms of price discrimination, is almost universally criticized by economists as unduly protecting small firms from competition by larger firms. Two recent Presidential commissions on the antitrust laws, the Neal Commission appointed by President Johnson and the Stigler Commission appointed by President Nixon, recommended that this law be reformed.

REGULATION OF MONOPOLY

As mentioned earlier, some industries are characterized by economies of scale over relevant ranges of output. Among the examples frequently cited are local distribution systems for telephone service and electric power transmission, where the high fixed costs associated with fixed facilities tend to preclude viable competition. Under such circumstances, it is argued, the establishment of a regulated monopolist would be a more efficient way of organizing the market. Such regulation, however, is inherently limited in its ability to promote efficient production and resource allocation.

Effective regulation depends on a great deal of information which is often difficult to obtain and interpret. In practice, neither the judgment nor the information of those responsible for regulation can be perfect. For example, even under the best of conditions it is difficult to ascertain the true cost base of a regulated monopolist, and often it is not very easy to determine the firm's cost of capital for the purpose of regulating its return on investment.

Idealized regulation also presumes that firms are passive with respect to the restraints imposed by the regulations. Recent studies suggest that a regulated monopolist will overcapitalize or undercapitalize, depending on the relation between the regulator's "guaranteed" return on investment and the firm's perceived cost of capital. Moreover, by forbidding the regulated firm to raise prices during times of excess demand, regulation reduces the incentive for the monopolist to maintain sufficient excess capacity. On the other hand, the assurance that regulation will shelter the firm from the costs associated

with scheduling too much excess capacity will act in the opposite direction, so the net effect is open to question.

During times of rapidly rising or falling prices, strict adherence to historical costs may have significant adverse effects. The delays necessary in regulatory proceedings frequently cause regulated prices to be held down unduly during times of rapidly rising costs. Unless the firm has a considerable degree of flexibility in altering production costs by reducing the quality of service—and even here demand must not respond too negatively to this diminution in quality—relying on historical costs may erode the firm's cash flow position and possibly even lead to bankruptcy. Although the results are seldom so severe, regulatory delays often cause deterioration of service and costly deferments in investment and maintenance expenditures.

REGULATION OF COMPETITION

Most governmental regulation is now concerned with the regulation of competition rather than with the regulation of monopoly. This change has come partly as a result of historical and technological evolution. For example, the ICC was understandably concerned with railroad monopoly power during the first years of its existence. In the first part of this century, however, technological advances brought about considerable competition for the railroads from trucking. Because of cross-subsidy, some railroad rates were unduly high, and truckers tended to concentrate on this kind of traffic. If the system of regulation were to be preserved, there had to be ways of administering it without bankrupting the railroads. Therefore, in 1935 the ICC and the railroads were successful in bringing most trucking under the regulatory umbrella, despite objections at that time from some truckers. In 1940, coverage was extended to inland water carriers. Thus, an opportunity to deregulate railroads made possible by new competition was sacrificed, and the scope of regulation was expanded.

As opposed to monopoly, markets with significant competition present the regulator with a slightly different set of problems. Although as a matter of law the regulator must still determine the rate base and the "fair" profit element, the more important problem is to understand and assess the way rate changes affect service under these quasi-competitive conditions, and how policies regarding price, entry, and exit affect the financial viability of the regulated firms.

In regard to financial viability, although exit from an industry via bankruptcy is a normal characteristic of efficient competitive markets, the bankruptcy of a regulated firm tends to be viewed as a sign of regulatory failure. To prevent bankruptcies, regulators are thus prone to protect firms from competition—frequently to the detriment of efficient service. For example, since the establishment of the Civil Aeronautics Board (CAB) in 1938, not a single trunk air carrier has gone bankrupt, although several trunk airlines at the brink of bankruptcy have merged with stronger carriers. For the purpose of limiting institutional failures, the Federal Reserve Board (FRB), the

Federal Deposit Insurance Corporation (FDIC), and the Federal Home Loan Bank Board (FHLBB) have set maximum rates of interest that may be paid on deposits and on savings and loan shares. A policy of protection can lead to knotty problems when the competitors employ different production techniques—as, for example, with trucking and railroading. ICC regulation has not been able to prevent (and probably has contributed significantly toward) the bankruptcy of several rail carriers in the northeastern part of the country. Protection is also difficult when technology changes. Thus, some regulated competitive industries are slow in introducing innovations.

The second major problem for the regulator of a quasi-competitive industry derives from the fact that, depending on technical feasibility and how firms view the response patterns of their rivals, there will be a tendency for changes in the extent of nonprice competition to raise or lower costs to match the regulated price. In such cases, cost tends to be determined by price, rather than the other way around, and the regulator's control over price amounts to regulating the extent of nonprice competition in the industry—and thus the quality and price choices available to buyers. Since higher quality will be associated with higher costs, a broad range of combinations of price and quality is often consistent with reasonably competitive returns to the individual firms, or at least to the firms as a group. In these circumstances the regulatory commission, in effect, serves as a surrogate for the general public, choosing the price and quality option which will be offered.

One ramification of this behavior among regulated competitive industries is that explicit regulation of the industry's rate of return may not be possible without additional controls, such as direct restraints on the extent of nonprice competition. Another aspect is that, whatever its justification, cross-subsidy may not be feasible. Purported "high-profit" markets will realize more costly, higher-quality service rather than excess profits; in alleged "losing" markets firms will restrict the quality of service to where average cost is in line with the low price.

EXAMPLES OF ECONOMIC REGULATION

Each regulated industry has different economic characteristics and ways of behaving under regulation. In several areas the economic costs of regulation have become apparent and are indeed significant.

TRANSPORTATION

Of all sectors of the American economy, few are more important than transportation, and none is more affected by Federal economic regulation.

Trucking

In interstate trucking an antitrust exemption allows carriers to agree upon rates in secret, through rate-bureau negotiations. Although these rates are subject to review by the ICC, they are seldom challenged except in cases

of general across-the-board increases. For example, during fiscal 1974, only 5 percent of motor common carrier rates were even challenged, and fewer than one-third of those challenged were ultimately disapproved. As a result of this process, rates tend to be set so as to cover the costs of less efficient carriers. The consequences are windfall profits to more efficient truckers and higher prices to consumers. In trucking markets with two or more carriers, service competition—for example, providing more frequent schedules or larger trucks—tends to eliminate the potential excess profits. However, the reduction in profits results not from lower rates but from the creation of excess capacity which has a lower value to the shipper than the extra price paid. In those markets where only one trucker has a certificate to serve, this process of rate setting helps the carrier to earn excess profits by offering poorer service, at the regulated price, than would be the case if other firms were allowed to compete.

The problems of excess capacity in "competitive" markets and of poor service in "monopoly" markets would both be eliminated if entry into the trucking industry were not restricted and if the ICC encouraged meaningful price competition. A monopolist earning excess profits would attract new firms; the result, in turn, would be lower rates and improved service. In those previously regulated competitive markets which had excess capacity, incumbent carriers would offer lower rates consistent with higher average loads. If they did not, new carriers would enter and force rates downward; the incumbent carriers would then have to respond with rate reductions or else lose out to the new competition. The ICC, however, has stringently controlled entry and price competition in trucking. Opportunities for profits attract many potential entrants, and during fiscal 1974 more than 70 percent of the Commission's case workload consisted of processing motor carrier operating permits.

Railroads

In railroad freight transportation, the problem is exit rather than entry. As outlying areas of the country gained access to good highways, and especially interstate highways, firms began to utilize trucks for much of their transport. This meant that low-density rail lines were used less and less, until many of them were no longer economical to operate. Nevertheless, regulation has prevented the railroads from discontinuing such services as fast as would seem warranted. The losses on unprofitable lines have impaired the overall financial position of the railroads and have reduced needed maintenance and capital investments elsewhere.

The structure of railroad rates often provides incentives that are inconsistent with an efficiently organized transport sector. Regulation enforces a considerable amount of cross-subsidy among commodities—to the point where certain high-valued items, such as machinery and equipment, are hauled at rates greatly exceeding their transport costs, while the rates for other items, such as crude ores, are much less than their transport costs. Simi-

larly, regulation attempts to maintain an elaborate system of discriminatory rate "equalizations" which tend to favor certain regions over others.

Rates that rail carriers pay for the use of other carriers' cars (called per diem) and the rates shippers pay carriers when they hold freight cars for extended periods (demurrage) are maintained at levels far below the opportunity cost on rail cars. As a result, freight cars are retained by carriers and are used excessively by shippers for warehousing. On average, a rail boxcar moves only 1 hour in 8, and its average speed while moving is less than 20 miles per hour.

Air Travel

In the domestic airline industry, regulation has served primarily to bring about a nonoptimal choice of price and quality. Because the CAB had a fairly liberal policy during the 1950's and 1960's toward the entry of existing carriers into city-pair markets, the principal markets are now served by two or more airlines. However, since their fares are regulated by the CAB, the airlines tend to compete on the basis of scheduling, over which the Board does not exercise direct control. The result is "excess capacity," and efforts to raise the regulated fares in order to assure a return on investment greater than the industry's perceived cost of capital serve only to set the stage for further capacity augmentation.

Carriers as a group have consequently tended to earn neither excess profits nor losses, but the traveling public has paid higher fares because of the regulation-induced excess capacity. While excess capacity does yield some benefit in the form of more frequent departures, less crowding, and a better chance of obtaining a seat on the preferred departure, the value of this excess capacity is almost surely less than its cost. As evidence, in the relatively unregulated California and Texas intrastate markets the competitively determined (higher-load factor) service has historically been sold at prices some 40 percent below the prices of comparable interstate (CAB-regulated) services. Moreover, a recent study reports that in 1969 domestic air passengers paid "excess fares" ranging between $366 million and $538 million, for which they received service quality improvements valued at between $118 and $182 million. The difference, between $248 million and $356 million, represents a deadweight loss to society.

In its recent Domestic Passenger Fare Investigation the CAB established target load factors of 55 percent. Since the prevailing load factors were around 50 percent, this policy had the effect of reducing excess capacity and lowering fares. However, it would appear that a much higher load factor standard is justified, especially in view of the recent increases in fuel prices. The Board's new policy of encouraging agreements among carriers to limit capacity is not an appropriate way of dealing with this problem. In markets covered by agreements, the passenger's total cost of service is increased because of increased delays, but the fare is not reduced.

Airline regulation imposes other costs, which are not generally well perceived. For instance, through the regulatory process, fares have tended

to be set at levels and with a structure that maximizes total seat capacity, as opposed to maximizing total passenger traffic, the result being added congestion and environmental costs, as well as increased costs of airports and airways. By restricting the entry of new firms into trunk carrier service in order to protect less efficient incumbent firms, regulation has also penalized potentially more efficient firms and has resulted in higher fares for a given quality of service.

These costs of airline regulation could be reduced substantially or even eliminated if entry into and exit from markets were made easier and if control over fares were liberalized so as to encourage price competition. Under such circumstances an individual airline could attract more passengers by lowering its price rather than increasing its total capacity.

FINANCIAL INSTITUTIONS

Banks and thrift institutions are among the most highly regulated businesses in the United States. The FRB, the FDIC, and the FHLBB, together with a host of other Federal and State agencies, regulate virtually every aspect of financial intermediation: entry, expansion, and exit, as well as pricing practices and allowable assets and liabilities. Opening a new bank, for instance, requires a charter that can be obtained from the appropriate State or Federal agency only if the applicant can demonstrate that a new bank would be in the public interest. Opening a new branch of an existing bank requires similar evidence in those States which permit branch banking. Comparable entry tests exist for thrift institutions.

Financial institutions are subject to a number of regulations when they issue liabilities (deposits) or buy assets. Banks, for example, are required to hold cash reserves for their deposits, and they are precluded from holding certain assets, including common stocks. Thrift institutions are subject to similar restrictions; in addition they are not permitted to issue checking accounts. Finally, and perhaps most importantly, except on large certificates of deposit, financial institutions may not pay interest to their depositors at rates that exceed maximums imposed by law or by regulation.

Although the rationale for regulating financial institutions is to safeguard deposits and assure market stability, in recent years the desirability of some forms of financial regulation has been increasingly questioned. This is particularly true of those regulations that were established before the 1930's, when Federal insurance of deposits greatly increased the security of banks and thrift institutions. One suggested reform is to reduce the restriction on the types of assets that banks and thrift institutions may hold and to allow thrift institutions to issue checking accounts. These changes would make financial institutions more flexible in their adjustments to changing market conditions and would also make the industry more competitive. An even more important proposed reform would eliminate interest rate ceilings on all deposits. Depositors could then enjoy competitive rates of return (especially during high interest rate periods like 1969 and 1973–74), and the flow of loanable funds for such purposes as housing would increase.

NATURAL GAS

Regulation of the field price of natural gas by the Federal Power Commission illustrates the problems of controlling the price of a commodity when entry into and exit from the industry are free. It also illustrates the sometimes illogical results when statutory requirements are divorced from the economic rationale behind their enactment. In this case, the price of gas, a commodity, is regulated because of its connection with transporting gas, a service; the price of a similar commodity, oil (perhaps produced from the same well), is not similarly regulated, though it is a close substitute for gas in final use markets. Results contrary to intentions could have been expected and at least one such result has been perverse: instead of assuring consumers access to supplies of gas, regulation has done exactly the reverse.

By holding the price of gas below the market-clearing levels, regulation has created chronic and growing shortages in the regulated interstate market beginning in the late 1960's. The shortages have resulted partly because of inadequate incentives for producers to explore for gas and bring it to market. Additionally, consumers are charged a price based upon the average cost of gas, and this price is lower because of the large volumes of gas flowing at the lower prices established in the past. Consumers therefore base their purchase decisions on a price below the regulated price for gas currently coming on the market, which itself is below the market-clearing level. Consumers respond to this energy "bargain" by seeking to use more gas than if they had to pay the full cost of replacing the gas reserves they consume.

The final factor in the interstate gas shortage is the diversion of gas supplies to the intrastate market where the price is higher. Onshore producers of gas usually have the legal option to sell it into either the regulated or the unregulated market. (Producers from Federal offshore leases must sell into the regulated market.) Even at comparable prices the intrastate market would be preferred by on shore producers because the absence of Federal jurisdiction gives them more certainty. The interstate market has thus always been the residual market for producers. Consequently, the price for intrastate gas rose little with the increase in total gas demand relative to supply; instead a larger proportion of the available gas went to intrastate sales. When no more gas could be diverted, the intrastate price began to rise rapidly. Producers who had a choice ceased selling into the regulated market except under special emergency provisions which allow higher prices.

The interstate shortage of natural gas induced by regulation has led to losses in output and to unintended redistributions of income. For example, many gas distributors have been unable to add new customers. In this situation a loss occurs because the value of the gas to the customers willing to bid some of it away would outweigh that realized by consumers who use it at volumes based on its constrained lower price. Income is redistributed toward those who consume gas at a subsidized price and away from those who are unable to obtain gas at all.

Interstate shortages, accompanied as they have been by adequate gas intrastate, have led industries to move to gas-producing States merely to obtain fuel. Greater quantities of other resources are used when gas regulation induces these otherwise uneconomic changes in industry location. Potential output for the economy is again reduced, while some regions are benefited and others harmed.

Another result of regulation has been a deterioration of the reserve base underlying gas consumption, and especially of the gas deliverable in the interstate market. The full requirements of already connected customers cannot now be met. Consequently, regulatory authorities must decide which parties get gas and which do not, even though each potential purchaser has equal contractual standing.

The effect of these shortfalls is exacerbated because of the way authorities allocate the available gas. Residential and some commercial customers, for whom a shift to alternative fuels would be impractical, are given the highest priority of service. Other firms are granted different priorities on the basis of the end use to which gas is put. Under this method, firms which have high priorities in the curtailment scheme do not shift to alternative fuels, even if a switch is practical. For them, natural gas remains the cheapest fuel. They have no incentive to make even a minor adjustment. While some customers would find a loss of gas supply only moderately damaging, curtailed supplies may force other users out of business altogether because fuel substitution is either impossible or prohibitively expensive. Yet, under current regulatory practice, there is no opportunity for mutually beneficial exchanges to redirect the available gas to its most valuable use. Output falls as a result; even the shortage is not allocated efficiently.

Importation of natural gas in liquefied form and its manufacture from other fossil fuels have also been encouraged by regulation. These expedients would have been either uneconomic or less significant if the natural gas price had not been held below equilibrium. A higher field price would have restricted demand, slowed the depletion of existing reserves, and raised supply, with the result that shortages would not exist at prices below the cost of alternatives.

Finally, imports of petroleum and petroleum products have been increased because of the natural gas shortage. Regulation of natural gas increases the demand for fuels as a whole. It also decreases the supply of domestic natural gas and, to some extent, of crude oil and natural gas liquids. The unsatisfied demand for natural gas in part is shifted to its closest substitute, oil. Because domestic oil supplies are limited, this demand is largely translated into increased oil imports.

* * * * * * *

The examples of regulation discussed above are primarily Federal regulation by independent commissions. There are other types of regulation that deserve close scrutiny for the costs they may impose on the economy.

563-280 O - 75 - 11

State and local governments also practice the commission form of regulation, particularly with respect to insurance and financial institutions. Another pervasive form of State and local regulation is occupational licensure. Depending on the State, people in an extremely broad range of occupations must obtain licenses: accountants, architects, attorneys, automobile mechanics, barbers, beauticians, chiropractors, electricians, embalmers, opticians, pharmacists, physicians, plumbers, radio/TV repairmen, surveyors, and others. In a similar vein, State and local governments often acquiesce in price-fixing arrangements, such as real estate settlement fees and fee schedules by professional associations. Often too, local codes of ethics and State statutes prohibit sellers of professional services from advertising or competing on the basis of price.

Federal, State, and local governments are also involved in regulating the use of so-called public resources. With regard to social costs and benefits, perhaps the most important example is regulation of the environment. There are two issues here: first, balancing the polluting uses against the nonpolluting uses, and second, choosing the appropriate instruments in order to minimize the cost of achieving this balance.

Both points are illustrated in the Federal Government's control of automobile emissions under the 1970 Clean Air Act Amendments. A recent report sponsored by the National Academy of Sciences and the National Academy of Engineering estimates the annual benefits of the existing program at $5 billion, but the annual cost at $11 billion (assuming that catalytic converters are replaced after 50,000 miles). According to the study, however, if the long-term standards on oxides of nitrogen (NOX) were relaxed, from 0.4 grams to 2.0 grams per mile, that cost would fall to only $5 billion. Alternatively, a policy of applying the long-term standards only to automobiles operated principally in seriously polluted or impacted areas, 37 percent of the total, also would lower the cost from $11 billion to approximately $5 billion. In either case, the reduction in benefits would not be substantial, and if the NOX standard were relaxed, changing technology might ultimately render the program's cost negligible.

Governments also regulate product and input standards. For example, in the case of drugs the costs of regulation include not only the direct costs of testing (borne by the FDA and private drug manufacturers) but also its side effects: fewer new drugs and delays in the introduction of those drugs which ultimately get to the market. In 1962 Congress amended the Food, Drug, and Cosmetic Act of 1938 to require that new drugs be proved effective as well as safe. Since then, the rate of introduction of new drugs has fallen more than 50 percent and the average testing period has more than doubled. Moreover, it is not clear that the average efficacy of drugs introduced after 1962 is any higher than that of drugs previously introduced. One recent study estimates that the 1962 drug amendments cost consumers, on balance, beween $300 million and $400 million during 1970.

REGULATORY REFORM

This discussion of governmental regulation suggests that existing laws and institutions are imposing significant costs on the economy. In surface transportation alone, one study puts the cost of regulation at between $4 billion and $9 billion annually. Precise estimates of the total costs of regulation are not available, but existing evidence suggests that this may range up to 1 percent of gross national product, or approximately $66 per person per year. Reforming regulation to eliminate these costs would undoubtedly entail some income transfers. Those favored by regulation (particularly existing regulated firms, their owners, and their employees) would lose somewhat and some others (particularly ultimate consumers) would gain. For that reason and to minimize other transitional difficulties it might be desirable to provide certain kinds of adjustment assistance and to introduce changes over a period of several years. But enacting such reforms could save billions of dollars by releasing resources for other uses, helping combat inflation, and making the economy more efficient and more productive in future years.

The Administration is moving forward to accomplish such needed reforms. During 1975 it plans to submit legislation to reform the regulation of airlines, railroads, trucking, and related areas. These legislative initiatives will call for a program which includes: more freedom for carriers to raise and lower rates without regulatory interference, greater freedom to enter markets and to exit from uneconomic services, and a narrowing of the regulator's power to grant antitrust immunity.

To address other regulatory issues, the Administration has taken or has in prospect several actions. First, the President has endorsed legislation to repeal the antitrust exemption that allows fair trade laws. Second, the Administration will resubmit proposals to reform the regulation of financial institutions. Third, the Administration's proposal for a National Commission on Regulatory Reform is being resubmitted. Fourth, the Administration plans to explore with State and local officials various concrete ways of reducing the anticompetitive effects of State and local regulations. Fifth, the Administration has created a high-level task force to examine the entire range of antitrust exemptions and to make recommendations to the President within 90 days. Finally, the President will shortly outline to the public his more detailed program of regulatory reform and may include additional proposals which are now under review.

CHAPTER 6

Food and Agriculture

AT THE BEGINNING OF 1974 it was expected that tight food supplies would boost retail food prices in the early months of the year, but domestic and world food production was also expected to expand later in the year. Barring unfavorable weather, a significant increase in American grain production was anticipated, which would improve the food outlook, enable some rebuilding of grain inventories, and help remove the upward pressure on prices in the second half of 1974.

Food prices, as expected, increased sharply in the early months, rising at an annual rate of 20 percent in the first quarter. The predicted leveling off began in the spring and continued until midsummer, but it was short-lived. Unfortunately, the anticipated increase in grain production did not materialize. Crop production was severely reduced in the major grain-producing areas of the United States by poor weather. Instead of the bumper harvests that had been forecast, crop production as a whole suffered the largest setback in nearly 40 years. Instead of substantially slower increases in the second half of 1974, retail food prices advanced at a 13.4 percent annual rate between June and December 1974. During all of 1974, food prices rose 12.2 percent, the same as all consumer prices.

Two other developments had a significant impact on retail food prices last year. First were the exceptionally large increases in charges for off-farm food processing and distribution in the first half of the year, partly because margins had lagged behind increasing costs during the period of price controls. Estimates of the spreads between farm and retail prices for farm foods consumed at home indicate that they rose at a 27 percent annual rate from the final quarter of 1973 to the second quarter of 1974. The second development was the extremely steep rise in sugar prices. Nearly half of U.S. sugar supplies are imported, and the price rise was mainly triggered by events outside this country. Wholesale prices of raw sugar jumped from 11 cents per pound at the start of 1974 to a peak exceeding 60 cents per pound in late November. This increase alone would have prolonged the upward pressures on retail food prices in the second half of 1974, even without the weather-induced setbacks in crop production.

At the end of 1974 the food supply situation was as tight as a year earlier, and the prospects for 1975 were uncertain because the full impact of reduced

grain and feedstuff output was not yet reflected in supplies of animal products. Although further increases in retail food prices were in prospect, reduced economic activity appeared to be dampening the demand for food. Indeed, by year-end, wholesale prices of farm products had actually fallen below those of a year earlier. Crop prices were up substantially; but livestock prices declined nearly 15 percent compared to the previous year.

DEVELOPMENTS IN 1974

Last year's events have demonstrated again the benefits to our economy and the world from good American harvests. Crop setbacks have affected the course of food prices, imposed stresses on the livestock industry, limited the capacity of the United States to provide food aid to developing countries, and prompted close monitoring and some limitations on commercial export sales. From the standpoint of the agricultural economy, 1974 was an uneven year. On the favorable side were these developments:

Foreign Demand

Foreign demand for agricultural products continued strong. The value of exports in fiscal 1974 reached a new high of $21.3 billion, more than double the value only 2 years earlier. In the current fiscal year the volume of exports is expected to decline, primarily because of reduced crop supplies, but the associated higher prices should maintain the value of shipments near the previous year's record. The increasing role of foreign markets has become central to policy matters concerning food and agriculture.

Farm Income

Total farm income remained high in 1974. Preliminary estimates indicate that aggregate net farm income fell some 15 percent short of the record $32.2 billion in 1973, but was nonetheless 50 percent higher than in 1972. In the past 3 years as a whole, returns to farm resources have been sufficiently high to encourage the expansion of productive potential, but the year-to-year changes in incomes emphasize the increased uncertainty of earnings, which is itself a deterrent to additional investment and production.

Food Consumption

Food demand was strong despite higher prices, and preliminary estimates indicate that consumption per person rose slightly above 1973. Per capita consumption of all animal products advanced 2.5 percent, reflecting the large increase in domestic production of red meats and poultry. Although meat production was down early in the year, from April through October it averaged a full 10 percent above the 1974 average. In contrast to meats, consumption of dairy products declined 2 percent for the year; retail prices rose sharply as the year began; later the increased supplies of other animal products and lower consumer income reduced demand. Despite their significance, the grain crop setbacks had little direct impact on the quantity of food consumed in 1974.

Three significant adverse developments last year will have consequences in 1975 and beyond:

Costs of Production

The costs of production inputs purchased from the nonfarm economy, particularly fertilizer, rose very sharply. The impact of general inflation on the agricultural economy has increased, along with the increased importance of nonfarm purchases for farm production. In 1974 the impact was particularly large: the cost index for purchased inputs increased 18 percent in 1974. Fertilizer prices were up more than 75 percent, partly in response to rising demand and partly because of a series of supply bottlenecks. The future availability of natural gas to produce fertilizer continues to be uncertain. The major significance of the steep rise in farm costs is that they are unlikely to decline, or they will do so only with a lag, if and when there is a significant decline in farm prices. As a consequence, the total crop-producing sector, which has enjoyed an extended period of increasing prices and returns, faces a possible deterioration in its current profitability at some point in the future.

Livestock Sector

The livestock-producing sector is undergoing large adjustments because of two related factors. First, the U.S. feed grain supply for 1974–75 is estimated to be the lowest since 1957, while the demand for feed grains is substantially greater. Supplies of other feedstuffs, such as oilseed meals, are also down. The situation is especially serious for hog and poultry producers who have little flexibility in feeding practices. Both are planning significant production cutbacks, and pork production is expected to be the lowest in many years. High feed costs have also reduced the number of cattle in feedlots, where feeding margins have been depressed for over a year. At latest count, cattle in feedlots were about one-fourth fewer than a year earlier, and prices of feeder cattle have consequently been driven down sharply.

The reduced profitability of cattle herds has, in turn, intensified a more fundamental adjustment problem in the cattle industry. A steady and large buildup in cattle numbers has been taking place since the early 1960's. Incentives to expand herds were especially great in recent years, and the buildup has averaged 3.2 percent annually from 1969 to 1974. In contrast to extremely tight beef supplies in 1973, cattle herds appear to be over-expanded under today's conditions. If herds expand more slowly, or if they should be cut back significantly, extra supplies of beef will reach the market in addition to the output of the herd itself. Total beef production would consequently increase markedly, even though the weight at which the animals are marketed declines. For instance, if the 1975 expansion in cattle inventories is reduced, as expected, to 2.4 percent from the 3.2 percent average rate of the past 5 years, beef production would increase 6.5 percent. A reduction to zero in the expansion of cattle inventories could mean

an increase in beef output by 15 percent. A slower rate of expansion in cattle inventories was already evident in 1974. Despite reduced marketing of cattle from feedlots, total marketings were up 9.0 percent in 1974; and the proportion of cows in total slaughter was substantially higher by year-end.

The American situation is replicated in many other beef-exporting nations as well as in traditional importing countries. The European Community, Canada, and Japan instituted embargoes or restraints on meat imports during 1974. Stocks of beef in the European Community, acquired to support prices to producers, are considered excessive. Australia has a very large potential supply of meat. During 1974, cattle were withheld from slaughter because of favorable pasture conditions in Australia, and also because of low meat prices and restricted markets outside Australia. American meat imports during 1974 fell rather sharply, even though they were not subject to quantitative restrictions. However, at the start of 1975 the Department of Agriculture announced plans to negotiate agreements with supplying countries designed to limit imports to about the same quantities as in 1974.

The appearance of a worldwide excess supply of beef, along with extremely large advances in food prices, was one of the paradoxes of 1974. Countries concerned with inflation were at the same time restricting meat imports to shield their beef producers. At year-end much of the oversupply had not yet been marketed and will be available in 1975 to offset reduced supplies of pork and poultry, which are more dependent than beef on grains and other feedstuffs.

Poor Crops

The poor crops in the United States during 1974 will have repercussions not only on our own economy but throughout the world. The 1974–75 world production of all grains is estimated to be down 5.0 percent from the previous year, a considerably larger drop than the 1.3 percent decline in 1972. Unlike those of 1972, the setbacks were mainly confined to the United States, and the losses were concentrated in feed grains rather than food grains.

In the spring of 1974 there seemed to be good reason to expect excellent U.S. grain production even if weather conditions were to be somewhat below average. Much field preparation had been completed the previous fall. Surveys showed that farmers were planning increases in their plantings because of favorable prices and the removal of Government acreage diversion programs. Fertilizer supplies were tight, but they exceeded the previous year; and efforts were under way to minimize bottlenecks in production and distribution. Then wet weather delayed spring plantings—which itself slightly reduced yields and made crops more vulnerable to early frosts—and prevented some fields from being planted at all. But the summer's dry and hot weather was the major setback. Preliminary official estimates of the

feed grain crop fell from 234 million (short) tons in March to 215 million tons in July, and then to 175 million tons in August, when the first survey based on actual yield estimates became available. Significant though smaller reductions occurred for wheat (from 2.1 billion bushels in March to 1.8 billion bushels in August) and soybeans (from 1.5 billion bushels in March to 1.3 billion bushels in August). Severe frosts in September and early October further damaged the feed grain and soybean crops.

This development created several problems. First, it reversed the expectation of price relief from improving food supply in the second half of 1974. Much of the adverse impact on food supplies will occur in 1975, however, as producers of livestock, poultry, and dairy products cut back their output in response to higher feed costs.

For this reason, it is important that the severe adjustments expected in the United States not be worsened by policies in other countries. Few countries permit agricultural markets to operate in an unrestricted way. If international markets were less restricted, however, the U.S. crop shortfall would result in higher feed costs to livestock producers abroad and in reduced feed consumption. Moreover, grain stocks would not be built up under such tight supply conditions. Consultations based on these principles were held with Japan, the European Community, the Soviet Union, and several other countries, the aim being to seek cooperation so that these countries would attempt neither to build stocks this crop year nor to insulate their economies from the adjustments to tight world grain supplies.

Further deterioration of U.S. crops in the fall of 1974, setbacks in other key countries, and speculation that the United States might impose export controls resulted in an upsurge of export orders reported under the Department of Agriculture's export monitoring system. Although pressures to control exports were intense, formal controls were resisted because the previous year's experience with soybean export controls demonstrated the serious impact of such a policy on our foreign customers. The prudent course consistent with international and domestic objectives seemed to be minimum Government interference with the flow of exports.

The Soviet Union, which had not been expected to purchase substantial quantities of grain from the United States, entered the market for larger quantities than had been anticipated. When this became evident, the Soviet sales were at first canceled; subsequently officials of both countries agreed that U.S.S.R. purchases would be limited to 1.0 million tons of corn and 1.2 million tons of wheat from the 1974 crops. A voluntary daily reporting system for larger orders was soon established under which approval is required before orders can be finalized. A number of other countries, including the European Community, have been requested to restrain their imports voluntarily during the current crop year.

Another related consequence of the crop shortfall has been the emergence, particularly in connection with the World Food Conference, of extraordinary pressures to increase substantially the volume of food aid

shipments under Public Law 480. The U.S. crop shortfall placed two new strains on the capacity to supply food aid. It first raised the opportunity costs of any given quantity of food aid, since any incremental exports would only aggrevate the adjustments required in the United States. It also raised the budgetary costs of any given volume of food aid during a period of concerted effort to hold down Federal expenditures. At the same time, however, the immediate benefits to recipient countries from more food aid would be significant. The great difficulties in resolving the conflicting objectives have shown the pitfalls in existing food aid programs, which have been a by-product of U.S. surplus disposal programs and closely tied to supply conditions for particular commodities.

LONG-TERM CHANGES IN AGRICULTURE

American agriculture finds itself in the mid-1970's at a watershed. A number of economic forces have converged to change substantially the economic environment in which the agricultural sector operates. Some of these forces are new, while others have been operating for some time to change the economic conditions faced by agriculture.

Agricultural policy underwent considerable evolution during the 1960's. In the early years of the decade agriculture was characterized by excess productive capacity and burdensome stocks that were primarily the consequence of price support programs. Crop prices were sustained in nominal terms during the decade, but rising prices in the nonfarm sector meant a downward drift in real prices. Agricultural production was brought into better balance with demand by the late 1960's, although this result was achieved in part through land retirement programs and direct cash payments to producers that reached nearly $4.0 billion per year.

Both the economic environment and the conditions in U.S. agriculture have since undergone substantial change. Excess capacity has declined, crop reserves have been drawn down, the world agricultural situation seems to have worsened, and agricultural products again appear to be subject to the unstable price conditions of an earlier era.

THE DECLINE IN EXCESS CAPACITY

Four major developments suggest that the excess capacity which characterized U.S. agriculture during much of the post-World War II period has declined. First, there appears to have been a decline in the growth rate of productivity of the combined factors used in farm production. Second, after many decades of excess labor in agriculture, the supply of labor appears to be moving into balance with demand. Third, what was believed to be a large acreage reserve withheld from production turned out to be in part illusory. Finally, there has been an increase in the demand for U.S. agricultural output, partly because of the two devaluations of the dollar and a shift to floating exchange rates, which have improved the competitive position of U.S. farm products in foreign markets.

Changing Sources of Growth

Contrary to the common notion that agriculture is a natural resource-based industry, the expansion of U.S. agricultural output since the 1920's has borne little relation to the total stock of physical resources used in agriculture. Major changes have taken place, however, in the proportions in which resources are used. For example, the stock of land in agriculture has remained relatively stable, while labor has moved out of agriculture at a rapid rate; the use of capital in the form of mechanization has increased, as has the use of modern inputs such as fertilizers and pesticides. Agricultural output has become progressively more dependent on resources produced in the nonfarm sector, and less dependent on land and labor.

Although the total stock of measured inputs has remained relatively stable, increasing productivity permitted fairly steady and sometimes burdensome increases in output. The source of improving productivity has been a subject of much debate. Public and private investments in research and development have led to better plant varieties, production techniques, and animal husbandry, and have improved the productivity of machinery, fertilizer, and other supplies purchased from the nonfarm sector. Better methods of production in the nonfarm sector have reduced the relative price of these inputs, causing them to be substituted for land and labor. Education has added greatly to the quality of labor and management in agriculture.

The changes in resource use and other indexes for the agricultural sector are shown in Table 41. The index of farm real estate, which reflects a charge for grazing fees and the use of land and service buildings, declined about 6 percent from 1950 to 1969–71. (Total land in farms remained virtually constant from 1940 to 1969, and land used for crops declined 10 percent.) But the application of fertilizer—an important land substitute—has increased rapidly, partly because successive technological breakthroughs in the fertilizer industry reduced fertilizer prices relative to the prices of output and

TABLE 41.—*Farm output and productivity, selected years, 1940–71*

[1967=100]

Category	1940	1950	1960	1969–71 average
Selected inputs:				
Labor	288	214	143	92
Farm real estate	102	104	99	98
Mechanical power and machinery	41	83	95	102
Agricultural chemicals [1]	13	30	50	113
Feed, seed, and livestock purchases	43	64	84	107
Taxes and interest	68	77	87	105
Miscellaneous	84	93	109	106
Total input	97	101	98	101
Total output	60	74	91	105
Productivity [2]	62	73	93	103
Number of farms	201	179	125	93

[1] Fertilizer, lime, and pesticides.
[2] Farm output per unit of total input.

Source: Department of Agriculture.

other factors of production. The use of fertilizer had increased 129 percent from 1940 to 1950. This rise was from a relatively low base, but fertilizer use increased 69 percent from 1950 to 1960, and another 113 percent during the 1960's.

The use of labor has declined fairly steadily from 1940 through 1969–71. A reduction of 26 percent in the 1940's was followed by a 33 percent reduction in the 1950's and an additional 36 percent reduction in the 1960's. However, the quality of the labor force has improved substantially. The reduction in the measured labor force therefore overstates the true decline taking place in labor use as skills and knowledge become an increasingly important component of the total.

The decline in the labor input has been offset at least in part by mechanization. Mechanical power and machinery in Table 41 represent depreciation and a use charge on the mechanical inputs, expenditures for maintenance, and fuel and energy. The most rapid increase in this category took place in the 1940's (102 percent) and was partly a war-induced phenomenon that resulted from labor mobilization for the war effort. The increase was substantially lower in the 1950's (14 percent) and still lower in the 1960's (7 percent). However, the measurement of this input probably does not fully capture the improvements in the efficiency of machinery in the last two decades, and hence understates the true increase.

Associated with these large changes in resource proportions have been a large and persistent decline in the number of farms and fairly steady advances in productivity, as it is conventionally measured. Total factor productivity has risen over each of the past three decades. It grew most rapidly during the 1950's, showing an increase of 27 percent compared to an increase of 18 percent in the 1940's and of only 11 percent in the 1960's. The extent to which the dramatic decline in productivity growth in the 1960's represents a real and enduring decline is not clear, but the answer is of critical importance to the future trends of U.S. and world food supply. Growth in productivity has been an important source of output growth in the past. It has enabled the United States to be one of the best-fed countries in the world, yet provide substantial food aid to other countries and simultaneously increase commercial exports. At the same time it has enabled the agricultural sector to supply large quantities of labor to an expanding economy.

The Agricultural Labor Market

A major share of the so-called farm problem in the last 20 to 25 years was a consequence of excess labor in the agricultural sector. Historically, the rapid increase in farm productivity, compared to other sectors, and the slower relative increase in the demand for farm products have required a transfer of labor to the nonfarm sector. Farm incomes, of course, lag behind nonfarm incomes as long as transfers are continuing. For all practical purposes, however, this process appears to be nearing an end.

The Nation's farm population reached a peak of 32 million in the depression years of the early 1930's. Since that time the trend has been

downward, except for a brief period following World War II, with steep declines for each decade starting in 1940 (Table 42). This decline, which took place at a rate of 4.6 percent per year during the 1960's, has slowed substantially since 1970 to an average of only 1.2 percent a year, marking the first extended period since the late 1940's that the reduction of the farm population has slowed.

TABLE 42.—*Farm population and farm employment, selected years, 1930–74*

Year	Farm population [1]		Farm employment	
	Number (thousands)	Percent change (annual rate)[2]	Number (thousands)	Percent change (annual rate)[2]
1930	30,529		12,497	
1940	30,547	0.0	10,979	—1.3
1950	23,048	—2.8	9,926	—1.0
1960	15,635	—3.8	7,057	—3.4
1970	9,712	—4.6	4,523	—4.4
1974	9,264	—1.2	4,294	—1.3

[1] Farm population includes people residing on units officially defined as farms. Since many of these "farms" are little more than rural residences for people attached to urban labor markets, the data overstate the number of people actually engaged in agricultural production.
[2] Annual rate of change from preceding year shown.

Source: Department of Agriculture.

Farm employment declined during the 1950's and 1960's at about the same rate as farm population, and has also declined at a much slower rate since 1970. Another indication of the increased balance between the farm and nonfarm labor markets is that the rise between 1970 and 1973 in median family income (measured in 1973 dollars) has been much more rapid among farm families, amounting to about 30 percent, compared to an increase of about 6 percent for nonfarm families in the same period. In 1970 the median income of farm families was about $3,700 less than that of nonfarm families; by 1973 the differential had been reduced to about $2,100.

The transfer of labor from agriculture to the nonfarm sector has been an important source of growth for the economy at large. Even if the aggregate farm population and labor force continue to decline, the movement of labor from the farm sector will probably make much smaller net contributions to a growing nonfarm labor force in the future. Average annual net outmigration during the 1950's and 1960's was 741,000 and 592,000 respectively, with a much larger gross outflow because of a considerable reverse movement. From 1970 to 1974, however, the average net outmigration was only slightly over 110,000 per year. The population base in agriculture is no longer large enough to provide outmigrants on the same scale as in the past, even with significant mechanical innovations and reorganizations within agriculture.

The problem of low relative incomes in agriculture has been the justification for many of the farm policy measures over the last 40 years. If the agricultural labor market is indeed near equilibrium, low farm incomes

should play a smaller role in shaping future farm policy. Certain groups in agriculture will continue to be disadvantaged, however, because of continuing regional imbalances and because certain components of the farm labor force do not have the skills to compete in nonfarm labor markets.

An Illusory Land Reserve

It was believed until recently that about one-sixth of the Nation's cropland was being withheld from production by Government programs and constituted reserve capacity. When these acres were released in 1973 and 1974, however, it became clear that many of them were unprofitable to bring back into production, even at higher prices. Crop acreage rose by only 37 million acres between 1972 and 1974, even though about 60 million acres were released from acreage controls. Thus, the actual excess capacity from this source was not nearly as large as the data suggested.

Undoubtedly the United States has additional land that could be brought into production. Substantial new investments will often be required, however, and such investments are unlikely to be made unless prices remain at higher levels than in the past. Moreover, for the most part such land will be marginal to that now in production, with the result that its contribution to output expansion will be less than that of land now being used.

Devaluation of the Dollar

American agriculture has benefited from an unprecedented export boom in the 1970's. The volume of exports averaged 39 percent higher in the 1972–74 period than in the previous 3 years (fiscal year basis). Part of this increased demand may be temporary. Demand for U.S. feed grains and soybeans was growing rapidly in 1972 and 1973 because of the rapid and simultaneous economic growth in Western Europe and Japan, and the consequent upgrading of their diets with more meat products. In addition, world output of grains declined in 1972 for the first time in 9 years. The bulk of the decline was outside of the United States; this situation, along with a shift in Soviet policy to maintain food consumption when output in their own agricultural sector declined, generated additional demand for U.S. exports.

Part of the increase in foreign demand for U.S. agricultural products was also due to the devaluations of the dollar in late 1971 and early 1973 and the shift to a system of floating exchange rates. Between May 1971 and the end of 1974 the dollar fell 13 percent relative to other currencies weighted by trade in our agricultural products.

The devaluations produced a once-and-for-all increase in the foreign demand for U.S. exports, although the effect is spread over several years. In addition, they caused imports of agricultural products—which grew substantially during the 1960's and early 1970's—to become less competitive in the U.S. market. The combination of greater foreign demand for U.S. agricultural output and a decline in competitive imports contributed to an increase in demand for U.S. products.

The depreciation of the dollar ended a period during which the overvaluation had reduced exports and kept domestic prices of agricultural products lower than they otherwise would have been (an effect that was offset at least in part by price supports, export subsidies, and other programs). During this period the United States sacrificed from a trade standpoint part of the comparative advantage that U.S. technological superiority in agriculture would have given it in world markets. Reduced exports also meant lower prices for U.S. consumers. The overvaluation of the dollar also intensified the normal need for resource adjustment that rapid increases in agricultural productivity had caused, and thereby contributed to the relatively low returns to resources employed in agriculture.

Owners of agricultural resources in the aggregate have benefited from the devaluation just as they had been penalized by the overvaluation, but the benefits have not been uniform. Grain producers have received significantly higher prices in the short term, but livestock producers have suffered because the prices of feedstuffs have increased. Once the increased demand has worked through the system, a new equilibrium will be established with higher prices for both grains and livestock products. The effect on factor returns will be determined largely by their relative elasticity of supply. The presumption is that the bulk of the benefits will be reflected in higher land values and larger returns to managerial skills, both of which are quite inelastic in supply.

Prices of grains are currently at relatively high levels, in part because of the shortfall in production of grains in the United States. As output recovers, prices should decline, but not to their pre-1972 levels unless there are other basic changes in demand and supply. Owners of agricultural resources will receive a larger share of the benefits of technical change in U.S. agriculture than they have in the past, as will foreign consumers. U.S. consumers, on the other hand, will receive a smaller share. The proportion of U.S. output that is exported should be larger than before the devaluations, and the price of food to U.S. consumers will be more heavily influenced by supply-demand conditions abroad.

A CHANGING WORLD AGRICULTURE

The capacity of the world to feed a growing population adequately has been a continuing concern. Beginning in the late 1960's, the world food situation began to improve markedly, and by 1971 considerable optimism was felt around the world. The so-called "Green Revolution" of miracle wheat and rice varieties and the greater use of fertilizer had increased the output of food grains, especially in Asia. Countries that had become traditional importers suddenly became self-sufficient or net exporters. India was even able to accumulate sizable reserves.

In sharp contrast, much has been made during this past year about a possible Malthusian crisis in the less developed countries. Population is growing at quite high rates in these countries and has done so since World

War II. Unless the growth of population slows, many question whether the necessary large increases in agricultural output can be achieved in the future. The upsurge in commodity prices these last 2 years and the famine conditions in the African Sahel and in South Asia bolster these fears.

This concern may be exaggerated, although there are a number of troublesome developments in world agriculture. One is a decline of approximately one-fourth in the growth rate of world agricultural production (excluding Communist Asia), from 3.0 percent in 1964–68 to 2.3 percent in 1968–73, or little more than the growth rate in the world's population. The decline is largely accounted for by a slowing of the growth of production in the developed countries, however, and was the result of explicit policies designed to bring the agricultural sectors of these countries into balance prior to 1973. Output increased at a rate of only 2.0 percent per year in the developed countries in the more recent period, a decline of one-third from their growth rate of 3.0 percent in 1964–68. In the less developed countries, on the other hand, where population pressures are greatest, output increased at 2.6 percent in the earlier period compared to 2.8 percent in the latter.

Viewed from a longer perspective, world agriculture has performed reasonably well. Prior to 1972 there had been 20 years of uninterrupted increases in output; as a result a population that was growing at unprecedented rates by historical standards was provided a small but significant increase in consumption per capita. During 1954–73 per capita food production in the developed countries increased about 1.8 percent annually. In the less developed countries, where the population was increasing most rapidly, the increase per capita was smaller, about 0.4 percent per year, but still significant.

Despite this relative success in feeding a larger population with increasing quantities of food, total agricultural output declined in 1972 after two decades of steady growth, and preliminary data for 1974 indicate no increase over 1973. Some attribute this to a fundamental change in the weather. Although climatic conditions may have been favorable in recent decades, 3 years are not enough to permit final conclusions about a shift in the weather. Whether output growth returns to sustained rates of increase will be a critical issue in the years ahead.

A second change is a reduction in the supply of new land that can be brought into production, at least at supply prices of the past. This fact is especially important for the developing countries, where the increases in output have been largely the result of increases in the area of land under cultivation. Grain yields in the developing regions, for example, were only 32 percent above the 1948–52 level in 1966–70. Over the same period, grain yields had increased by 63 percent in the industrial regions, with very little increase in land under cultivation. In countries like India, moreover, the land resource has been damaged by water and wind. Much land around the world can clearly be brought into production, but to do so requires investments in roads, transportation, land reclamation, and drainage.

The emerging land constraint need not limit increases in output, as the experience of the United States and other developed countries demonstrates. But the ability to achieve more rapid increases in yields will require the development and adoption of improved techniques of production and abundant quantities of modern agricultural inputs. This, in turn, will require greatly expanded public and private investments in research and development, as well as enlarged production capacity to provide adequate supplies of fertilizers. With rising costs of energy, at least nitrogen fertilizer is likely to be more expensive than in the past.

A third change in world agriculture is the increased dependence on the United States as a supplier of agricultural products (Table 43). As recently as the late 1930's, North Africa, the Middle East, and Asia were net exporters of grains. Now these regions are consistently net importers. Similar trends elsewhere have made the United States the dominant exporter of grains, responsible for more than 50 percent of the total.

A number of recent studies have projected a growing imbalance in food supplies between the developed and the developing economies. Unless production accelerates, the developing countries are expected to have growing food deficits well into the 1980's. The developed countries, on the other hand, are expected to have growing surpluses.

The post-World War II increase in overall trade has largely been among the developed countries, with a decline in the share of trade between the developed and developing countries. This trend must be reversed if the projected imbalance is to be accommodated. The developed countries may have to import more raw materials and industrial products from the developing countries in exchange for agricultural products.

TABLE 43.—*World net imports and exports of grain, selected periods, 1934–73*

[Millions of metric tons; annual averages]

Country	Net imports (—) or net exports				
	1934–38	1948–52	1960–62[1]	1969–71[1]	1972–73[1]
Developed countries:					
United States	0.5	14.0	32.8	39.8	73.6
Canada	4.8	6.6	9.7	14.8	14.8
South Africa	.3	.0	2.1	2.5	3.1
Oceania	2.8	3.7	6.6	10.6	8.9
Western Europe	−23.8	−22.5	−25.6	−21.4	−21.0
Japan	−1.9	−2.3	−5.3	−14.4	−18.5
Centrally planned countries:					
U.S.S.R. and Eastern Europe	4.7	2.7	.5	−3.6	−14.2
China	−1.0	−.4	−3.6	−3.1	−6.3
Developing countries:					
Latin America	9.0	2.1	.8	3.2	.6
North Africa and Middle East	1.0	−.1	−4.6	−9.2	−13.7
Asia	2.4	−3.3	−5.6	−11.0	−14.8

[1] Fiscal years.

Note.—Grain includes wheat, milled rice, corn, rye, barley, oats, sorghum, and millet.

Source: Department of Agriculture, Economic Research Service.

GREATER PRICE INSTABILITY

A number of factors suggest that the U.S. food and agriculture sector has entered a period of greater price instability. The large stocks of agricultural products in Government hands, which reflected the excess capacity at prevailing prices, were largely liquidated during 1972 and 1973. These stocks provided a stabilizing influence on the market, since they offered a means of dampening and offsetting year-to-year fluctuations in production both in the United States and abroad. Similarly, a land reserve, withheld from production during the late 1950's and 1960's, provided another means of offsetting changing conditions of demand and supply. Without these cushions, agricultural prices are more subject to changing market conditions both at home and abroad. Moreover, the expectation that a larger share of U.S. output will go to export markets will further expose the agricultural sector to the vagaries of world markets.

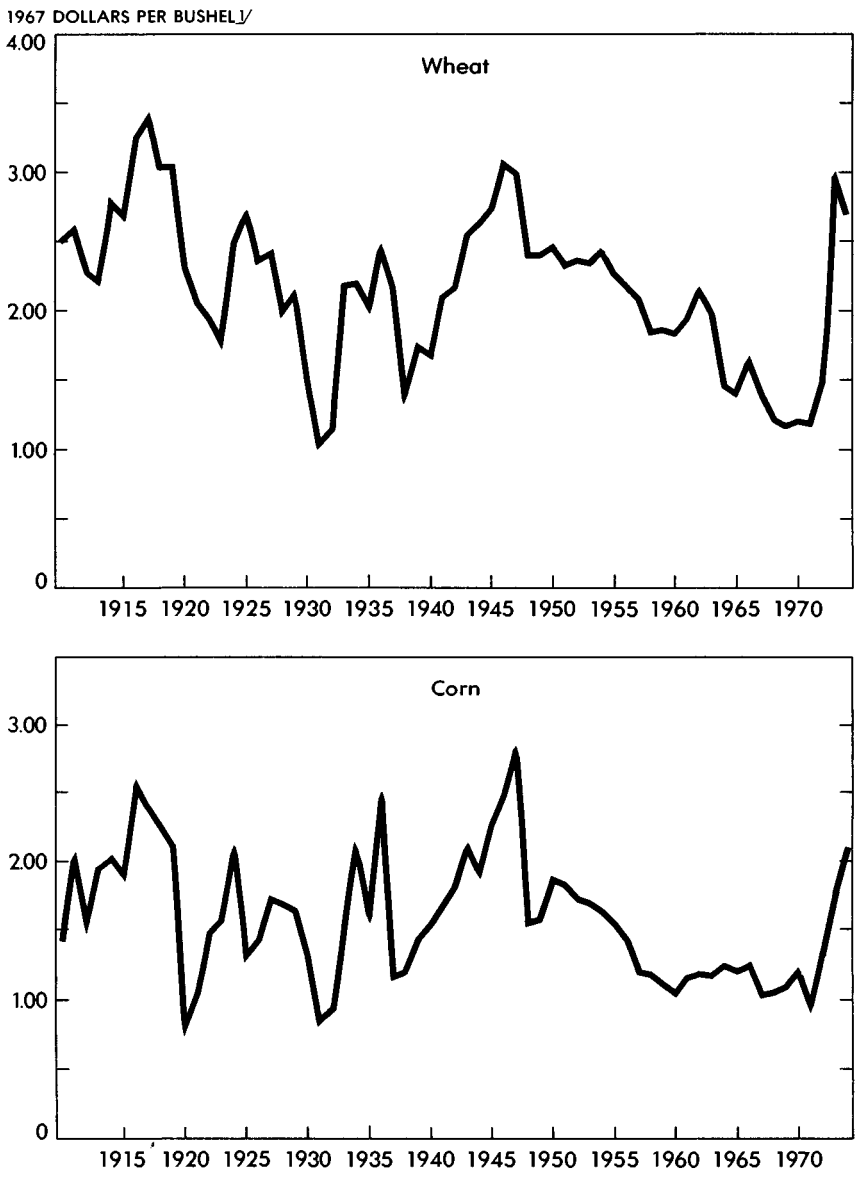
A number of conditions have intensified the effects in the United States of fluctuations in world agriculture. The domestic agricultural policies of the European Community and Japan inhibit the adjustments that can take place in their agricultural markets. Consequently, the burden of adjustment to changing conditions of demand and supply is pushed onto the United States and other exporting countries. In addition, the growing involvement of the U.S.S.R. in world trade in recent years has transmitted to world markets the shocks stemming from fluctuations in the relatively unstable agricultural sector of that country. Some 80 percent of the year-to-year fluctuations in the world wheat trade since 1960 have been accounted for by swings in Soviet wheat trade.

Charts 9 and 10 provide a historical perspective of the price instability problem for four important agricultural products. Actual prices have been deflated by the wholesale price index (1967=100) for all commodities in order to express them in real terms. Compared to prices before 1950, agricultural prices were much less volatile from 1950 to 1971, when there were larger reserves in the form of excess productive capacity and actual stocks of grain. The extent to which the price variability declined from 1910–49 to 1950–71 is shown in Table 44 for six important products. Measures of variability (variance and coefficient of variation) declined in every case except the coefficient of variation for wheat; and in some cases the decline was quite large.

Factors other than reserves undoubtedly influenced the degree of instability in the two periods. Recessions in the post-1950 period were mild compared to those earlier, and built-in stabilizers acted to cushion the declines in income when a recession did occur. Income-induced fluctuations in demand were therefore milder in the more recent period. Barriers to trade were relatively high from 1920 to 1950 but lower after World War II, despite the previously mentioned foreign agricultural policies which affect trade. A greater integration of countries by means of trade has taken place in the

Chart 9

Farm Prices of Wheat and Corn in Constant Dollars

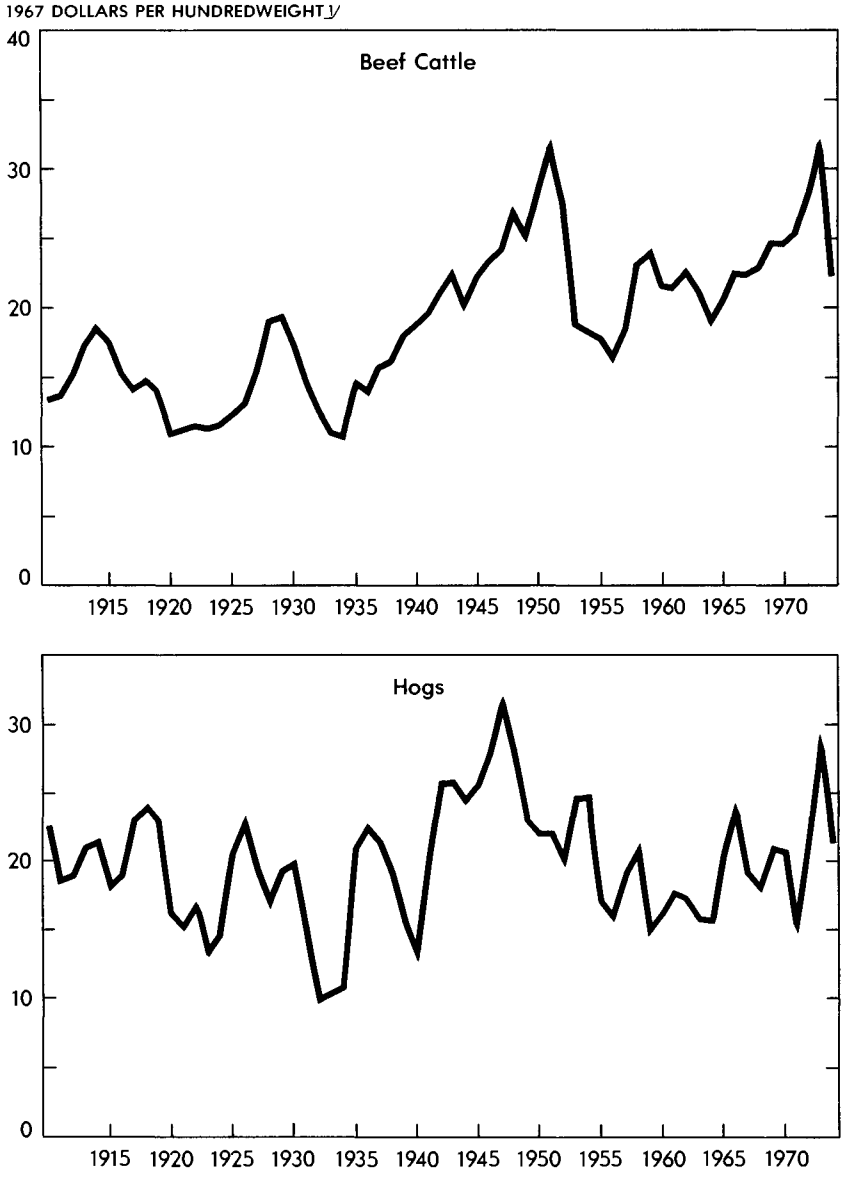


1/CURRENT DOLLAR PRICES RECEIVED BY FARMERS DEFLATED BY THE WHOLESALE PRICE INDEX FOR ALL COMMODITIES (1967=100).

SOURCES: DEPARTMENT OF AGRICULTURE, DEPARTMENT OF LABOR, AND COUNCIL OF ECONOMIC ADVISERS.

Chart 10

Farm Prices of Beef Cattle and Hogs in Constant Dollars



1/ CURRENT DOLLAR PRICES RECEIVED BY FARMERS DEFLATED BY THE WHOLESALE PRICE INDEX FOR ALL COMMODITIES (1967=100).

SOURCES: DEPARTMENT OF AGRICULTURE, DEPARTMENT OF LABOR, AND COUNCIL OF ECONOMIC ADVISERS.

TABLE 44.—*Indicators of the variance of farm prices in constant dollars, selected periods, 1910–71*

Commodity and period	Mean [1]	Variance	Coefficient of variation
Wheat:			
1910–49	2.31	0.279	0.229
1950–71	1.84	.190	.236
Corn:			
1910–49	1.73	.227	.276
1950–71	1.31	.072	.206
Cotton:			
1910–49	33.8	92.9	.285
1950–71	32.3	50.2	.219
Soybeans:			
1910–49	3.08	.914	.311
1950–71	2.56	.091	.118
Beef cattle:			
1910–49	16.43	17.9	.258
1950–71	22.36	13.2	.162
Hogs:			
1910–49	19.88	23.7	.245
1950–71	19.13	8.7	.154

[1] Annual averages: Dollars per bushel for wheat, corn, and soybeans; cents per pound for cotton; dollars per hundred pounds for beef cattle and hogs.

Sources: Department of Agriculture and Council of Economic Advisers.

recent period, and transportation and communication systems are greatly improved. These improvements not only diffuse shocks from the supply side somewhat more broadly, but also make for a quicker adjustment to changing economic conditions.

Although the stocks in Government hands during 1950–71 were acquired as a means of supporting prices above market-clearing levels, not as a stabilization reserve, their acquisition and release appear to have provided an important stabilizing influence on commodity markets. This stability was not without its costs, however. The stocks were quite large, and consequently they were costly both to acquire and to maintain. Since they were acquired as a by-product of programs designed to support farm prices, the increased stability was also a by-product. But the maintenance of comparable reserves for stability purposes would have similar costs.

A key question is whether we have returned to a period of increased price variability comparable to that prior to 1950. Grain prices have increased very greatly in 1973 and 1974. Yet normal weather in the United States and around the world will enable grain output to recover sharply in 1975. This increased supply would come into the market under conditions of weakened demand both from cyclical downturns in the economies of the developed countries and from a reduction in livestock enterprises. The consequence could be an abrupt reversal of the present situation, with much lower grain prices and higher prices for livestock products.

Certainly there are some elements in the present situation that are comparable to the period prior to 1950, especially the absence of large stocks. On the other hand, as noted above, important differences exist in the current situation which should serve to attenuate the price fluctuations.

Without a significant rebuilding of stocks, more price instability should be expected than during the 1950's and 1960's, but it seems unlikely that year-to-year changes will be as large as in the earlier era.

POLICY CHALLENGES AND OPTIONS

U.S. agricultural policy has in the past been dominated by two somewhat contradictory themes. The first has been the attempt to increase agricultural output, largely through public investments in agricultural research, the dissemination of new agricultural techniques, and in some cases the subsidization of inputs. The second theme has been a concern with the problem of low relative incomes in agriculture, which led to programs aimed at supporting farm prices above market-clearing levels and holding production down through restricting acreage and at times marketings.

An unintended by-product of these programs was the accumulation of sizable stocks of agricultural products in Government hands. These stocks and the recently diverted acres provided a degree of increased stability to commodity markets. They were also the means by which considerable amounts of food aid were provided to foreign countries, aid that eventually became an important component of the Nation's foreign assistance programs. But these benefits were obtained at considerable cost: less efficient use of the Nation's resources and heavy Government involvement in the agricultural sector.

The changed conditions of agriculture and the shift to market-oriented domestic farm policies that took place during the 1960's and early 1970's have solved many of the earlier difficulties, but new issues have emerged. The decline in excess capacity in agriculture and the sharp increase in food prices have added to the importance of obtaining low-cost increases in agricultural output. Moreover, with the growing interdependence between U.S. and foreign markets, the U.S. consumer may for the first time have an obvious interest in expanding the agricultural output in developing countries and improving the stability of international markets.

The rise in incomes in agriculture has reduced the importance of the farm-income problem. There will undoubtedly be an increased concern about instability, however, with the danger that in attempting to deal with this problem we will return to policies that created other problems in the past. If prices should decline precipitously from their current high levels, the temptation will be great for the Government to intervene by raising price supports above market-clearing levels.

The return of the dollar to near equilibrium exchange rates and the shift to floating rates place the United States in a better position to capitalize on the considerable comparative advantage that it has in agricultural products. To do so, however, will require continued emphasis on trade liberalization. Parallel to this is the need to encourage more market-oriented agricultural policies among our trading partners in order that the United States need not carry a disproportionate share of the adjustment to changing conditions of

demand and supply in world markets. Further adjustments in our own agricultural and trade policies will also contribute to a more flexible agricultural sector.

AGRICULTURAL DEVELOPMENT

The World Food Conference held in Rome in November 1974 had the primary objective of devising means of coming to grips with the emerging world food problem. The United States proposed to the Conference a comprehensive program of urgent, cooperative worldwide action on five points:

1. Increasing production in food-exporting countries.
2. Accelerating production in developing countries.
3. Improving the means of food distribution and financing.
4. Enhancing food quality.
5. Ensuring security against food emergencies.

Increasing agricultural output both at home and abroad is probably the critical issue on this agenda. Our state of knowledge with respect to ways of fostering agricultural development has advanced considerably in the last decade. Studies have shown that investments in developing and disseminating new production technology tend to have a high rate of social return. The adoption of new production technology involves increased use of modern inputs, such as fertilizer and machinery, which are produced in the nonfarm sector. The capacity to produce these inputs usually needs to be increased if generalized modernization is to take place, and adequate price incentives are important for their adoption. Similarly, improvements in the human agent through investments in schooling and training programs are required for the rural population.

Many developing countries have tended to underinvest in agricultural research and in the schooling of their rural population. Moreover, they have often concentrated their industrialization efforts on steel mills and the accoutrements of a modern mass-consumption society, to the neglect of industries which would have provided expanded supplies of modern agricultural inputs. In addition, they have discriminated against their agricultural sectors by means of trade and domestic price policies, thereby reducing the incentives to adopt modern inputs.

If these policies are changed, there is good reason to expect food output to keep up with increasing population and growing demand into the foreseeable future. To change the policies, however, will require considerable political courage and the ability to focus on longer-run requirements rather than short-term exigencies.

Even with changed policies by the developing countries, there is still a role for assistance by the advanced countries to facilitate the modernization of world agriculture. The United States has a tradition of providing such assistance, starting with President Truman's Point IV program. However, foreign assistance provided through that program concentrated on the transfer of our own knowledge rather than the development of new knowl-

edge, and therefore placed undue emphasis on strengthening farm extension programs in developing countries. The limitations on the transfer of agricultural production technology from one area to another were not adequately recognized, nor was the importance of strengthening the capability for agricultural research under ecological and economic conditions similar to those in which the new production technology was to be used.

In recent years the United States has shifted a larger portion of its diminishing foreign aid budget toward agricultural development, with particular emphasis on assisting small producers and landless workers. The United States has also supported since its inception the Consultative Group on International Agricultural Research, which allocates resources to the International Centers for Agricultural Research, and more recently it has agreed to establish an International Fertilizer Development Center in the United States.

The immediate challenge in strengthening world agriculture is to develop the national capabilities for agricultural research in the low-income countries. The generation and application of new production technology are the keys to agricultural development, particularly where land constraints exist. Although basic principles and basic plant material can usefully be transferred, new production technology for the most part has to be developed under tne conditions in which it will be used.

There is also continued need to support agricultural research in the United States, as well as a need to make more effective use of existing resources. The private sector can and does support a great deal of agricultural research, and its expenditures for this purpose have grown. However, the private sector can be expected to undertake only that research from which it will be able to capture a return. Much of the knowledge produced from agricultural research is a public good, and private entities cannot capture the full benefits from it. This is especially true of basic research.

There has been a shift toward more applied research in recent years, partly because of budget measures and partly to make the research effort both more visible and more accountable. In fact, however, publicly supported research might better concentrate on basic research, leaving the applied research to the private sector. At the same time, attention might be directed to the efficiency of the current research establishment. The appropriate number of research stations, the division of labor between the universities and other research institutions, and the priorities in the research program itself are questions that should be examined.

Public support (State and Federal) for agricultural research in the United States has increased only slightly (1.6 percent) in constant dollar terms from 1968 through 1973, with a somewhat larger increase in scientific man-years devoted to such research. As a fraction of the gross national product from agriculture, however, public expenditures on research have declined from 1.4 percent in 1968 to 1.2 percent in 1973. At the same time there has

been a shift away from output-increasing research and toward a greater emphasis on social and environmental problems.

THE INSTABILITY PROBLEM

Changes in relative prices are desirable because they provide important signals to both consumers and producers about changes in relative scarcity of products. They help ration limited supplies among competing uses in times of short supply and encourage consumption when supplies are large. Agricultural prices are subject to larger fluctuations than many other products, mainly because production is subject to unpredictable shocks from the weather. Moreover, the biological nature of the production process results in a considerable lag between the time resources are committed to production and the time output is forthcoming, and the climatically induced production cycle limits the extent to which crop shortfalls can be replenished. In contrast, many other sectors of the economy have a continuous production process and output can more easily be adjusted to changes in demand.

Large swings in agricultural prices result in a loss in resource efficiency, since producers will frequently have made the wrong decision ex post. In addition, wide fluctuations in agricultural prices lead to transfers of income between producers and consumers. While these shifts will be offsetting over several years, they can be severe from the standpoint of either group in a particular year.

For producers, part of the problem is obtaining adequate information. If at the time of committing resources to production they knew what the demand would be when their output was expected to be sold, they could adjust their production decisions accordingly. Hence, information has value to society, and both producers and society at large can afford to use resources to improve that information, although there are obvious limits to predicting the weather and to a lesser extent Government policy.

Institutions have developed which provide protection to participants in unstable agricultural markets. An important example is futures markets, which offer a way of reducing uncertainty through hedging operations. Futures markets furnish an efficient means of pooling informed judgments about what prices will be. But because they cannot remove the source of price instability, they do not remove the basic resource misallocation that results from widely fluctuating prices. The farmer who makes production decisions based on $3 corn can protect that price through an appropriate hedging operation. However, if his corn is valued at $1 when it is sold, the cost from producing inappropriate quantities will still be there.

Government policy can help alleviate the instability problem in many ways, through: (1) improved information and analysis, (2) greater coordination of domestic agricultural policies among countries, (3) freer trade in agricultural products, and (4) building and maintaining greater grain reserves or stocks for use in years of crop shortfall. Whether the latter is required will depend in part on success in the other endeavors.

Improved Information and Analysis

The traditional Government role of providing information and analysis is an essential component of a free market philosophy. The importance of both is now greater than ever, especially in view of the interdependence of the U.S. food and agriculture sector with the world economy. With increased instability, more accurate forecasts of future market conditions will lead to a more rational allocation of resources. But improved forecasting will require an improved data base both here and abroad, the cooperation of other governments, and a strengthened and expanded capability to analyze these data. During the past year several significant steps have been taken to upgrade the statistical programs and forecasting work of the Department of Agriculture.

Coordination of Domestic Agricultural Policies

The Government has also sought to improve coordination among countries in the conduct of their domestic agricultural policies. For example, consultations were held in 1974 with many countries in order to obtain adjustments in domestic policies that would help alleviate the pressures from reduced U.S. grain output and large worldwide supplies of beef. Greater coordination in the future can cushion the shocks imposed on U.S. agriculture from abroad.

Trade Liberalization

Trade liberalization is an essential element in providing increased stability in world markets and in assuring food security for all countries. Weather-induced fluctuations in production could be offset through changes in exports and imports, thereby evening out the supply for any one country. The larger market area that would result from freer trade would increase the chance that the effects of bad weather in one location would be offset by good weather in other areas.

Efforts to liberalize trade are hampered by domestic agricultural policies designed to fix prices either above or below what would be market-clearing levels in the absence of such policies. Both kinds of policies have trade implications and are potentially destabilizing to world markets. If prices are set above market-clearing levels, restrictions on imports have to be imposed. If they are set below market-clearing levels, then exports have to be limited in order to provide adequate supplies to the domestic market if the country is on balance a net exporter, or imports must be subsidized if the country is to attain its domestic price goals. Such policies in effect push adjustment problems onto other countries, thereby making their agricultural sectors more unstable.

The intertwined nature of trade policy, domestic agricultural policies, and reserves policies is illustrated by the experience of the last 2 years. The sharp rise in grain prices, combined with weakening prices for livestock and poultry products and unacceptable rates of inflation, gave rise to pressures to control and limit exports. With freer trade, a larger area of supply might

have been tapped to accommodate the demand. Similarly, with more flexible domestic prices in some countries, price increases would have dampened some of the demand. In either case there would have been a more general sharing of the burden.

Grain Reserves

In the absence of more flexibility on the side of trade and domestic agricultural policies, the availability of contingency reserves can serve to cushion price rises. The experience since 1972, however, points up that reserves would have had to be very large to provide a stabilizing influence, larger than any one country or even a few countries would be willing to carry.

For this reason, and to achieve greater world food security, the United States has proposed an international system of nationally held grain reserves. In the past, the exporting countries—primarily the United States—have carried the bulk of the grain reserves. Since reserves may also benefit importing countries, a greater sharing of the costs among countries seems justified in the future.

Negotiations on grain reserves will be held in 1975. These discussions are likely to be protracted, since there is little agreement either on who benefits and who loses from stabilization or on the appropriate quantities of contingency reserves. Similarly, agreement on rules and criteria for managing the stocks is lacking.

There are several additional difficulties in developing an international system of nationally held grain reserves. One problem is that the benefits will accrue partly to those who have not paid for them. A possible solution is to negotiate a system that includes penalties and sanctions for those who do not participate. For instance, such countries could be denied access to the reserves in a period of tight supplies. Alternatively, reserves that participant countries accumulate and pay for might be made available to nonparticipants on less attractive terms, perhaps by an export tax at least equal to the accumulated carrying charges.

The acquisition and maintenance of grain reserves will have a variety of costs. While stocks are being accumulated, consumers pay higher prices than they otherwise would; and when they are released, producers in a similar way receive lower prices. Unless stocks are managed properly, they can be destabilizing by untimely release or accumulation. Moreover, there is the danger that a reserve program will again, as in almost all past attempts, become a price-propping program, used largely to insulate one sector or another from market forces.

There are two reasons why the United States should build grain stocks above their current low levels. First, conditions of free trade do not prevail in the world, and the United States provides freer access to its supplies than most other countries do. Under these conditions contingency reserves, if correctly managed, would provide a means of offsetting the shocks that come from abroad and furnish some protection to U.S. consumers and producers

(especially livestock producers). Second, ample stocks are one way to maintain confidence among foreign customers that this country will be able to meet its export commitments. If access to supplies cannot be assured, countries have a tendency to diversify their supply sources, turn to self-sufficiency, or perhaps resort to both of these.

FOOD ASSISTANCE

The United States provides food assistance to low-income groups through a variety of programs, especially the Food Stamp Program. This program has been greatly expanded and extended in recent years. Although not all the families eligible for such assistance have made use of it, budget costs to the Government have grown from only $250 million in fiscal 1969 to $4.0 billion in fiscal 1975. Moreover, it is estimated that food stamp bonus dollars raise food expenditures by 60 to 65 cents per dollar in contrast to an increase of from 20 to 30 cents per dollar in food expenditures that would be expected from comparable cash income supplements to this low-income group. An additional demand therefore has been placed in the market for food at the very time that food prices were rising sharply.

There is serious question as to whether the distribution of stamps is an efficient means of income transfer under current circumstances. A possible reform of the Food Stamp Program would be to replace the food stamps with direct transfers of money income to provide the recipient more freedom of choice and lead to a more efficient welfare program.

Large quantities of food aid have been supplied to foreign countries as part of our foreign aid program. This program has provided a convenient means of disposing of stocks accumulated in Government hands as a by-product of price support programs, and has thereby helped to reduce the costs to the taxpayer of carrying large stocks.

In contrast to the Food Stamp Program, food aid shipments under the Public Law 480 program have declined in recent years. Shipments fell from 10 million tons in fiscal 1972 to slightly over 7 million tons in 1973 and less than 4 million tons in 1974.

The objectives of food aid can be to alleviate human suffering caused by shortfalls in production in developing countries to furnish more limited relief when such natural disasters as earthquakes or hurricanes occur, or to supply continuous food aid as a means of balance of payments support or foreign aid to individual countries. The negotiations evolving out of the World Food Conference will attempt to solve the more persistent food security problems.

A country with a comparative advantage in agriculture might want to provide some fraction of its foreign aid in the form of agricultural products. With the decline in excess capacity in the U.S. agricultural sector, however, and the changes in domestic farm policy, such aid is no longer the "free" good that it was once imagined to be. Except to the extent that it substitutes for commercial sales, every incremental increase in tonnage shipped for this

purpose represents a corresponding reduction in the supply available to the domestic economy—and an increase in prices to the domestic economy. The costs of the program have now become more explicit, with the result that more rational policy choices may be made. The question is how desirable it is to provide food aid beyond the commitment to promote food security under conditions of stress, since continuing food aid can reduce incentives to strengthen the agricultural sector of the recipient country.

GUIDELINES FOR DOMESTIC FARM POLICY

Since the mid-1960's commercial farm policy has evolved toward much greater market orientation. The previous commodity programs, dating back to the 1930's, were built around a system of mandatory acreage allotments, marketing quotas, and high price supports for individual field crops. Today only a few crops (rice, peanuts, tobacco, and long-staple cotton) continue under such rigid programs. The difficulties with these programs were enormous: they were mandatory and inflexible to changes in supply and demand; they overstimulated the production of particular crops and led to the excess Government stocks of the 1950's and early 1960's; they provided "artificial" benefits, or subsidies, which became locked into land values; by holding up domestic prices, they conflicted with a liberal trade policy, requiring restrictions on imports and subsidies to make American products competitive in world markets.

The first major step in the transition was to reduce (market) price supports on individual crops and replace them with direct cash payments which were contingent on diverting land from crop production. Gradually the emphasis on individual crops was discontinued, allowing producers discretion to plant crops they considered most profitable. The principles that have guided the transition are economically sound.

1. Market prices should not be supported above market-clearing levels. Price supports to prevent excessive downside price declines in surplus years should be relatively low and cover only variable production costs. While providing an element of guarantee to producers, low floors avoid any need for export subsidies and encourage expanded domestic consumption and exports when supplies are large.
2. Production of individual crops should be free of controls. Controls interfere with producers' ability to make the best use of resources in response to changing conditions. If needed at all, production controls should be through general land diversion.
3. Direct cash payments are more efficient than high price supports as a means of providing income support to producers. Such payments are only warranted because of the volatility of agricultural markets, which can create excessive financial losses. In most years they should be unnecessary and should be limited to providing guarantees against the exceptional years of oversupply, thereby shifting some risk from

producers to taxpayers but permitting consumers to benefit from lower prices.

The agricultural developments beginning in 1972 enabled the principles to be implemented: almost all diverted land was released for production; export subsidies were phased out; import restrictions were relaxed to some degree; prices moved not only well above market supports but sufficiently high that direct payments under the provisions in the 1973 act were limited to wool and soil conservation. In effect, developments in the market contributed to a fairly dramatic move toward a policy of increased reliance on the market. These principles were, to a substantial degree, embraced in the Agriculture and Consumer Protection Act of 1973.

FARM POLICY IN 1975 AND BEYOND

In considering policy in 1975 and beyond, the principles that have guided farm policy in the past decade still apply. Government policy can function in complementary ways, as discussed above, through participation in a constructive international system of grain reserves, improvements in domestic and international information and analytical systems, measures to make international trade in agricultural products more flexible, and efforts to expand food production in developing countries. It is important, however, not to change farm policy in ways that are inconsistent with these principles. Efforts to raise price or income guarantees to producers, if successful, might have some small temporary effect in 1975 by reducing uncertainty and encouraging all-out production. However, even though market prices are expected to remain well above current guarantees in the immediate future, any substantial increase now would be a move backward for farm policy. When food supplies become more abundant in relation to demand, higher price supports would prompt a return to substantial land diversion, large Government payments, export subsidies, and import restrictions—and possibly even to the mandatory production controls of the past.

Current problems with dairy programs illustrate the pitfalls in heavy Government involvement. State and Federal marketing order programs institutionalize a higher price of milk for fluid consumption than for processing, and they restrict the free movement of raw milk. Together with import quotas and a relatively high Federal minimum price support, these measures place the dairy industry under heavy regulation and discourage efficient production. Consumers eventually pay extra for milk; and, because imports are usually limited to less than 2 percent of total consumption, trade in dairy products has become a constant source of dispute in trade policy. The dairy producers' welfare, on the other hand, is dependent on and affected by decisions setting Federal regulations. For many dairy farmers production is often unprofitable, and their numbers have been diminishing. Although there would be serious adjustment costs in reforming dairy programs according to the principles set forth above, the dairy industry could

in time become more efficient and prosperous, and consumers would purchase more milk and dairy products at lower prices.

* * * * * * *

Although economic circumstances have permitted a desirable move to a market-oriented commercial farm policy, they have also brought out a basic characteristic of agricultural markets: large price fluctuations and the uncertainty that these fluctuations generate. Producers, consumers, and Government policy makers will learn to adjust to the increased uncertainty. As this happens the instability itself will be diminished, but learning is not an instant process. In the meantime, steps that would return the agricultural sector to a more regulated basis in response to short-term or temporary problems should be avoided.

CHAPTER 7

The International Economy in 1974

IN 1974, THE WORLD ECONOMY experienced severe setbacks. Inflation in most major industrial countries reached the highest level in more than 20 years. The rate of real economic growth declined. Sharp price increases in energy, food, and other basic materials distorted price relationships and created new and large payments imbalances, affecting nearly all countries. Massive international capital movements of unusual complexity were required to continue the financing of world trade, which in terms of dollars rose by about 50 percent from mid-1973 to mid-1974.

Specifically, consumer prices in the industrial countries comprising the Organization for Economic Cooperation and Development (OECD) rose by almost 14 percent on the average from 1973 to 1974. This rate of advance was nearly double the average rise of 7½ percent from 1972 to 1973, and nearly four times as high as the annual rate of increase of 3½ percent during the period 1959–72.

Economic growth came to a virtual standstill as the growth of real GNP in the OECD countries, which had averaged about 5.4 percent per annum from 1959 to 1972, fell nearly to zero in 1974. Efforts to check the acceleration of inflation coincided with ongoing cyclical downturns in many countries, and the high costs and reduced availability of energy reinforced the adverse development of both prices and output.

In international trade, the sharp rise in the prices of crude oil implemented in October 1973 and January 1974 by the countries belonging to the Organization of Petroleum Exporting Countries (OPEC) created massive deficits in the current account balances of the oil-importing countries. This placed strains on the world's financial markets and raised the prospect for the long term of a large transfer of real resources or of ownership of nonfinancial assets from the oil-importing to the oil-exporting countries. Nonindustrial countries, particularly in Asia and Africa, were in many cases seriously afflicted by food shortages and the slowdown in world economic activity.

The international financial and economic system displayed a notable resilience in adjusting to some of these disturbances. Broadly speaking, countries have refrained from beggar-my-neighbor policies through which they might have tried to shift some of their domestic and international problems to other countries at the cost of a shrinkage in world trade and a loss in economic welfare. In the financial sphere, the world capital markets ab-

sorbed and recycled massive amounts of petro-dollars and provided most of the financing of international payments deficits and surpluses, with some assistance from official lending operations conducted either by the International Monetary Fund (IMF) or between governments. The existing system of floating exchange rates helped countries avoid massive movements of speculative funds.

The international monetary system was thus able to cope with differing rates of domestic inflation, the increased costs of energy and other basic goods, and the heavy capital movements associated with the accumulation of large amounts of liquid assets by OPEC countries.

STAGNATION AND INFLATION IN THE INDUSTRIAL WORLD IN 1974

The stage for "stagflation" during 1974 was largely set in 1970–71. Beginning in late 1969, a slowdown in economic activity occurred in industrial countries that, while relatively mild, was more widespread than any downturn in the postwar period. The stimulative measures which a majority of countries adopted almost in unison in 1971 and maintained well into 1972 resulted in a strong upswing in economic activity in 1972–73 throughout the industrial world.

The expansion in demand added to the inflationary tendencies; the rise in consumer prices in the seven largest OECD countries, that had been 4 percent from 1971 to 1972, was 7½ percent from 1972 to 1973. Moreover, the coincident upswing in business activity led to a sharp increase in demand for industrial commodities and strained the capacity of producers to supply that demand. The index of spot prices of world industrial materials (excluding fuel) rose by 80 percent between 1971 and 1973. Poor harvests in the Soviet Union and other parts of the world added to the emerging price pressures on food. World food prices almost doubled as the world commodity index for food (1970=100) gradually rose from 95 in 1971 to 173 in 1973.

The policy makers in most major industrial countries were confronted early in 1974 with the difficult task of dealing simultaneously with high inflation and slackening economic growth. Superimposed on these problems were domestic and international dislocations created by the sharp rise in the prices of crude oil. Deep concern about inflation prompted fairly restrictive fiscal and monetary policies to be maintained in most countries throughout the first half of the year.

The resulting pattern of economic change has been remarkably uniform in the major industrial countries during 1974. Table 45 highlights some measures of the economic performance of these countries. The growth of private consumption expenditures that had been the dynamic factor in the economic expansion in virtually all major countries during 1973 slowed down sharply in 1974.

TABLE 45.—*Changes in real gross national product and major components for selected industrial countries, 1962 to 1974*

[Seasonally adjusted annual rate]

Country and component	Percent change				
	1962 to 1971 average	From preceding year		From preceding half year	
		1972	1973	1974	
				1st half	2d half [1]
France:					
Real GDP [2]	5.7	5.5	6.0	4.5	4.2
Private consumption	5.5	5.8	6.0	4.6	3.5
Government current expenditures	3.3	4.0	3.4	2.6	2.5
Gross fixed capital formation	8.2	7.6	6.5	5.6	5.0
Germany:					
Real GNP	4.7	3.5	5.3	2.0	.0
Private consumption	4.9	4.2	2.9	1.0	2.2
Government current expenditures	4.4	4.1	3.8	3.0	1.5
Gross fixed capital formation	5.3	2.7	1.1	—5.3	—8.5
Italy:					
Real GNP	5.0	3.1	6.0	4.9	.0
Private consumption	5.6	3.3	6.2	4.0	—1.0
Government current expenditures	3.9	4.6	3.3	3.6	.0
Gross fixed capital formation	3.7	.4	9.0	4.7	—2.2
United Kingdom:					
Real GDP [2]	2.6	3.1	5.3	—3.4	5.0
Private consumption	2.3	6.0	4.6	—2.0	4.5
Government current expenditures	2.1	4.0	3.7	—.4	—.5
Gross fixed capital formation	4.0	2.4	4.8	—5.7	—7.5
Japan:					
Real GNP	10.3	8.9	10.2	—9.3	3.0
Private consumption	8.9	9.1	8.6	—6.6	5.5
Government current expenditures	6.7	9.6	6.9	—1.2	7.0
Gross fixed capital formation	13.0	9.5	15.2	—28.2	3.2
Canada:					
Real GNP	5.5	5.8	6.8	5.6	2.5
Private consumption	4.9	6.9	8.0	6.6	3.0
Government current expenditures	5.8	4.0	4.1	8.6	5.0
Gross fixed capital formation	5.8	5.3	10.4	8.4	.0

[1] Estimate.
[2] Gross domestic product.

Source: Organization for Economic Cooperation and Development.

With few exceptions, the tight monetary policies of early 1974 caused severe declines in residential construction in virtually all countries. Industrial investment in machinery and equipment, which had risen vigorously during 1973, dropped off sharply in response to much higher long-term interest rates and the deterioration of the business outlook.

The softening in economic activity was accompanied by rising unemployment; the 1974 unemployment rate exceeded the average of the past decade in most major industrial countries. Recent changes in unemployment in several OECD countries are summarized in Chapter 3.

In late 1974 the demand management policies in a number of countries began to move cautiously toward greater ease; but inflation continued to be of major concern to the policy makers. Assessing these policies, the OECD

583-280 O - 75 - 13

in its *Economic Outlook* of December 1974 has projected a moderate upturn in economic growth and some easing of inflationary pressures in all major countries by the second half of 1975.

INTERNATIONAL REPERCUSSIONS OF THE OIL PRICE INCREASES

The oil embargo and the subsequent fivefold increase in the Persian Gulf price of crude over September 1973 levels imparted the most severe shocks to the world economy since World War II. The broad economic implications of these developments for production, consumption, and economic growth in the United States are discussed in Chapter 2. For other industrial and developing countries of the world the implications were qualitatively similar, but the force of the impact varied in proportion to the dependence of individual countries on imported oil as a source of energy.

In analyzing the effects of the increase in the price of oil on the world economy, one can single out four broad areas: income and output, prices, the current account, and the capital account.

Income and Output Effects

Given the relatively low short-run price elasticity of demand for oil, the economic consequence of the oil price rise was a diversion of consumption expenditures in the oil-importing countries from domestically produced goods to imported petroleum products. To the extent that prices of other consumer goods did not decline, the immediate result of such a diversion was a reduction in the real income of consumers in the oil-importing countries. When the purchasing power created in the production of domestic goods and services is transferred to the oil-exporting nations, and these nations do not increase their imports correspondingly, aggregate demand would tend to decline in the short run unless the reduction is offset by domestic policy action.

The gross transfer of purchasing power realized through export receipts of the OPEC countries in 1974 has been estimated at nearly $100 billion, all but about $5 billion of which were received in payments for exports of oil. This represented a more than threefold increase in revenues over 1973.

The increased exports to OPEC countries could offset only a small part of the reduction in aggregate demand stemming from the increase in the oil bill borne by the oil-importing countries. All estimates of non-oil transactions by the OPEC countries are subject to a great deal of uncertainty. It appears, however, that OPEC imports of goods and services increased by about $15 billion in 1974 to about $35 billion—approximately a third of the OPEC revenues. After subtracting grants to developing countries and adding income on their investments, the OPEC countries were left with roughly $60 billion as current account surplus in 1974.

The nature and direction of investment of the surplus funds by the OPEC countries in 1974 are discussed below. As far as the immediate impact of

the oil price increase on income and output in the oil-consuming world is concerned, the surplus may be viewed as increased "saving" that resulted from the shift of world income from economic units with a relatively high average propensity to consume (consumers in the oil-importing countries) to economic units with an extremely high average propensity to save (oil exporters). The OPEC savings were made available to the oil-importing countries through the reflow of funds. To the extent that such funds were channeled toward financing current consumption or real investment in individual oil-importing countries, the reflow of financial capital into the credit markets of those countries has cushioned the demand-dampening effect of the higher bill for oil imports. How far the slack in demand created by the oil price rise was offset either by the return flow of OPEC funds or by the internal demand management policies of individual countries cannot be precisely determined. Domestic policies to dampen inflationary pressures, and the depressed state of the economies in many of the oil-importing countries provided little incentive for using the inflow of the OPEC funds to increase real investment or consumption.

In addition to the demand-dampening effects of the increase in "saving," the high price of energy reduced demand for goods that use energy intensively. This shift created structural unemployment of resources, since many factors of production are highly specialized in the short run and yield low productivity in other uses. The demand for autos, for instance, fell sharply in virtually all major countries, causing widespread unemployment in the world auto industry.

In the longer run, as the OPEC countries develop the capacity to increase their imports of goods and services, further structural changes will have to take place in the economies of the oil-importing nations: resources must be shifted to increase the production of goods and services for export. Thus, the real income of consumers in the oil-importing countries will be reduced as more domestically produced goods and services are exchanged for imports from the OPEC countries. Unlike the reduction in real income experienced in the short run, this reduction cannot be offset by domestic monetary or fiscal policies, since it represents the "real" payment for oil.

Price Effect

In general, a direct link between the increase of a specific price and that of the general price level exists only in the short run. For practical purposes the duration of the "short run" depends on the monetary and fiscal restraint accompanying the price rise. It is therefore difficult to quantify precisely the contribution that the rise in the oil price made to the inflation in the oil-importing countries during 1974.

The short-run effects of increased oil prices on the general price level in different countries occurred through several channels. The most obvious one was the direct impact arising from the higher prices that consumers in individual countries must pay for petroleum products like gasoline and heating oil. This effect is directly evident in the consumer price index (CPI)

of individual countries, depending on the weight these commodities are given in the market basket.

An indirect impact also occurs as increases in the prices of other goods and services follow from the rise in the price of petroleum products used in production. The strength of this indirect effect depends on the extent to which oil price increases are passed through to the prices of final products, absorbed by the producers, or amplified under a system of markup pricing. Finally, the higher prices of oil heighten the demand for substitute sources of energy, driving up their price and raising production costs. How long the effect on the general price level lasts and how output develops under such strains depend on the way in which demand management policies react to the dilemma, as discussed in Chapter 4.

While it would be hard to establish the total effect of these influences on price behavior, the direct effect of price increases for gasoline alone leaves no doubt that the oil price increase contributed significantly to the price pressures in the world economy during 1974. For example, the increase in the price of gasoline from October 1973 to August 1974 added between 1 and 2 percentage points to the rise of the consumer price index in Great Britain, Italy, and the United States.

Current Account Effect

The increase in the price of oil by the OPEC countries led to a large deficit in the current account of the oil-importing countries, and a matching surplus in the current account of the oil-exporting nations. Table 46 highlights the change that occurred between 1973 and 1974.

The magnitude of the imbalance has been and will continue to be the result of interaction among the following factors: the quantity of oil imported by the oil-consuming nations; the price of oil set by the OPEC cartel; the value of their imports of goods and services from the rest of the world; the flow of earnings on the financial assets of the OPEC countries; and the grants and aid donations they choose to make to the developing countries of the world.

TABLE 46.—*Balance on current account of major areas, 1973–74*

[Billions of dollars]

Area	1973	1974 [1]	Change, 1973 to 1974 [1]
OPEC countries [2]	5.0	60.0	55.0
Industrial countries [3]	2.5	−37.5	−40.0
Rest of world	−7.5	−22.5	−15.0

[1] Preliminary.
[2] Organization of Petroleum Exporting Countries.
[3] The 24 countries of OECD.

Sources: Department of the Treasury and Organization for Economic Cooperation and Development (OECD).

The ability of the oil-consuming nations to lower their oil imports in response to the higher price has been limited. Oil represents an important source of energy for industrial countries and for many developing nations. The growth in world oil consumption came to a halt during 1974; a substantial reduction, however, must await implementation of further measures and development of alternative sources of energy.

The power to raise prices has been derived from the strong monopolistic position of the OPEC countries. An individual country cannot increase the price of a homogeneous commodity without facing sharply reduced exports and lower revenues, if there are alternative sources of supply. If a number of exporting countries act jointly to drive up the price, however, and the supply forthcoming from the remaining exporting countries cannot readily be increased, output restrictions can indeed be effective. With respect to the OPEC, this has clearly been the case so far, although the growing responsiveness of non-OPEC output and total import demand to the higher prices set by the OPEC should make maintenance of these relative prices more difficult over time.

The highly unequal distribution of income characteristic of the OPEC countries and the confinement of income gains from trade to narrow segments of the population precluded significant increases in demand for many imported products in the short run. For other countries in the OPEC group, the long lead time required in developing major projects was the main constraint limiting their ability to increase imports by the full amount of the increase in revenues. Most OPEC countries, particularly those with relatively small populations like Saudi Arabia and Kuwait, have been spending only a fraction of their additional oil revenues on imports of goods and services, because their ability to absorb additional imports has so far been limited. Thus it may be several years before the OPEC countries develop the capacity to increase imports of goods and services substantially.

Finally, while actual grants and commitments for future donations by the OPEC countries have risen sharply, current and prospective grants still represent only a small portion of their total revenue derived from oil. Furthermore, the flow of investment income from the financial and real assets acquired by the OPEC countries has been growing rapidly.

Given these factors, the elimination of the deficit poses special problems. Some of these can be identified conceptually by contrasting the increase in the price of oil with a hypothetical revaluation of the OPEC currencies. Analytically the oil price increases may be viewed as if they had been produced by an export tax. For the importing countries, the administrative increase in the price of foreign oil caused current account deficits that were larger than those that would have materialized if, instead of imposing an "export tax," the OPEC countries had chosen to revalue their currencies to achieve the same increase in the price of oil to importers. Given the low price responsiveness of demand by oil importers, even a revaluation might have the abnormal effect of raising the OPEC surplus if the import

demand of the OPEC countries is also quite unresponsive to any change in the domestic price of their imports. Conceptually, a revaluation is equivalent to a tax on all exports plus a subsidy of all imports. Compared to this, the OPEC countries chose to tax only the oil exports and not to subsidize imports, thus assuring that increased revenue from oil exports would not be accompanied by revenue losses from other exports and increased spending on imports due to lower prices.

Under present circumstances a current account deficit of the oil-consuming nations as a group vis-a-vis the oil-exporting nations must be accepted. Efforts by one of the oil-consuming nations to reduce the deficit, either by currency depreciation or by special measures designed to boost exports or reduce imports from other oil-importing countries, would inevitably mean an increase in the current deficits of others, leaving the total deficit of the oil-consuming nations largely unchanged. For the time being, oil-induced current account deficits must therefore be financed by drawing on reserves, by selling equities, or by accumulating international indebtedness.

To supplement the capacity of the world's money and capital markets to finance the deficits experienced by individual countries, special financial arrangements have been put into effect and are being developed further. Also, in May 1974 the OECD nations pledged not to take unilateral measures which would tend to shift deficits to other nations. Specifically, the governments of 24 member countries agreed, for one year, to avoid introducing restrictive measures affecting trade or other current account flows. The pledge will very likely be renewed in May 1975. In the United States, passage of the Trade Reform Act by Congress at the end of 1974 signified that pressures to restrict trade, which have been intensified by the oil crisis, will be resisted. Moreover, the act assures that the long-delayed multilateral trade negotiations can get under way. The purpose of these negotiations is to improve access to international markets for both buyers and sellers by reducing restrictions on imports and by limiting any restrictions on exports that prevent foreign buyers from competing with domestic buyers for certain basic materials, food, and feedstuffs on an equal footing.

The Capital Account Effect

The current account surplus experienced by the OPEC countries in 1974 was matched by the accumulation of financial claims on the oil-consuming world. This, of course, follows as a balance of payments accounting identity: funds received in payment for goods and services or as aid, and not spent on goods and services or given away as aid, must simply end up as financial claims or real assets of various forms in the hands of countries in the surplus area. What was true as an accounting identity for the oil-importing world as a whole, however, was not true for individual countries: there is no *a priori* reason why the oil-related current account deficit of an individual country should be matched by an inflow of funds directly from the oil-exporting countries. As expected, given a choice of where and how to invest their surplus funds, the oil-exporting countries have turned to those national mar-

kets that best meet their objectives with respect to security, return, and maturity.

Preliminary estimates for 1974 indicate that about $11 billion of the $60-billion surplus accruing to the OPEC countries has been invested directly in the United States. This was less than the increase in the U.S. bill for oil imports from the OPEC countries. Roughly half of this investment in the United States was in short- or long-term marketable Government and agency securities. Less than a billion was placed in U.S. real estate and private securities, and the remainder in banking and money market liquid assets, such as large negotiable certificates of deposit.

About $7½ billion of the OPEC surplus was invested in the United Kingdom in pound sterling assets such as bank deposits, other money market instruments, and government securities. About $5½ billion was lent by the OPEC countries to official and quasi-official institutions in other industrial countries, around $2½ billion to the developing countries, and about $3½ billion to international financial institutions. At least $21 billion of the OPEC surplus was held as Eurocurrency deposits in banks in London and in other financial centers around the world. (The functioning of the Eurocurrency and Eurodollar markets is discussed in the supplement to this chapter.) The remainder, about $9 billion, includes investment in European investment management accounts, in real estate and corporate securities in Europe and Japan, and in direct loans to private industry.

The financial intermediation by the world's commercial banks through both domestic and Eurocurrency markets has played an important role in financing the large current account deficits in the oil-importing countries during 1974. Such activity, in effect, accommodated the preferences of the OPEC countries for investment of their surplus funds, then redistributed these funds to countries where funds were needed. Banks operating in the Eurocurrency market publicly announced more than $15 billion of Eurocurrency credits to developed countries during the first 3 quarters of 1974, $4 billion more than was announced during all of 1973. Announced credits to developing countries were about $7½ billion. Some of these credits were not actually drawn during the period; but it is assumed that sizable loans for which details are not available have been made by the Eurocurrency banks without prior, publicly announced commitments. International lending by U.S. banks also rose sharply in 1974, following the removal of restrictions on such activity and termination of the Interest Equalization Tax in January 1974. U.S. banks increased their claims on foreigners by about $14.5 billion during the first 3 quarters of the year.

The recycling of OPEC funds by the international banking system has not, however, been accomplished without some strains. The concentration of liquid OPEC investments in a relatively small number of banks has raised questions about the absorptive capacity of some of these institutions under their present capital structures. Because the deposits by OPEC governments

in some banks are so large, and because they are concentrated among few depositors, the risk associated with the traditional banking practice of borrowing short and lending long is significantly increased. At the same time, the growing indebtedness of some borrowers increases the risk of default. Thus, questions have also been raised about the ability of the private banking system to continue to accommodate adequately the financial needs created by the oil crisis.

To supplement private market channels a special lending facility was established in June 1974 in the International Monetary Fund and expanded in January 1975. Loans are approved by the Fund after assessment of the balance of payments needs of deficit countries. Borrowers are expected to cooperate with the Fund in resolving difficulties in their balance of payments. The Fund had lent approximately $2 billion by the end of 1974.

The pattern of international payments for 1975 is not easy to foresee. It is widely recognized, however, that additional reinforcement of the private financial markets may be required to provide for the financing needs of individual countries. The United States accordingly has advocated a three-track approach to official multilateral arrangements:

1. Financing under the regular procedures of the International Monetary Fund should be expanded, and the Fund should make fuller and more effective use of the currency resources which it now possesses.
2. A temporary trust fund should be established to provide longer-term, concessional assistance to a few of the very low-income countries which have special problems in adjusting to the current situation. The United States has proposed that this trust fund be financed by contributions from those individual countries which are in a position to help, as well as through the use of part of the IMF's gold holdings.
3. Resources of the IMF and other institutions should be supplemented by a new financial support arrangement of $25 billion. The arrangement is designed to encourage cooperation in energy matters and to provide a financial "safety net" for participating OECD members. Early establishment of this support fund has been agreed to by the major industrial countries.

THE LESS DEVELOPED COUNTRIES IN 1974

Although many of the problems created by the oil price increases are common to both developed and less developed economies, there are several important differences. The less developed oil-importing countries are obviously far less able to afford the higher current prices, but their diversity makes generalizations difficult.

Developing countries that export primary products, such as iron ore and bauxite, for which demand was strong, have been able to offset a part of their increased oil bill with additional export earnings. A commodity boom which began in late 1972 drove up the prices of many primary products, but the prices of most of these commodities declined in the second half of 1974 with

the worldwide slowing of business activity. Moreover many countries which are heavily dependent on imports of oil, food, and fertilizer have not experienced increases in prices of their primary exports, and droughts and floods have compounded their problems.

The surplus revenue of the OPEC countries is derived in part from sales to other less developed nations that import oil; but relatively little of this surplus has yet been recycled directly by OPEC countries to the less developed ones. Partly because of the limited capital markets in these countries, initial placements of funds by oil producers have not been large. The consequences of the failure to recycle funds to the less developed countries are qualitatively similar to those facing the industrialized nations: if they cannot finance their deficits, they must cut back on imports. However, many less developed countries can reduce imports of oil or other inputs only at the immediate expense of their industrialization programs.

As has been true for many years, some form of foreign aid may be the only way to alleviate the deficiencies in financing and resources of the poorest countries. Special arrangements such as the IMF facility have helped in some measure and will probably continue to do so. At a time when even many industrial nations are in difficulty, more of the surplus of OPEC nations should be mobilized to help countries most in need of the funds, and these funds should be available at rates which do not further increase the already heavy burdens of debt service in developing nations.

RECENT DEVELOPMENTS IN INTERNATIONAL FINANCE

The international financial system has been fundamentally changed since August 1971, when the United States announced suspension of the convertibility into gold of dollars held by foreign monetary authorities. Following this action, major exchange rate realignments, coupled with devaluation of the dollar in terms of gold, were negotiated in December 1971 and February 1973; and negotiations were launched on a comprehensive reform of the international monetary system with establishment of the Committee of Twenty (C–20) under the auspices of the International Monetary Fund in July 1972. In March 1973, in response to great uncertainty and speculation in the foreign exchange markets following the second realignment, virtually all of the major industrial countries abandoned efforts to confine exchange rate movements within a narrow band around established par values. When the C–20 met during the IMF annual meetings in September 1973, it set July 31, 1974, as its target date for agreement on comprehensive monetary reform.

The oil price increases announced in October and December 1973, the acceleration of worldwide inflation, and *de facto* adoption of widespread floating radically altered the circumstances surrounding the C–20 negotiations. At its Rome meeting in January 1974, the C–20 shifted the focus of its negotiations. Instead of the early development of a comprehensive reform agreement, it began to work out a series of individual, less comprehensive

steps that were of particular importance in the current economic situation. In mid-June the C–20 Ministers agreed on a program for immediate action and released the *Outline of Reform* and accompanying annexes that described both the status of the negotiations on longer-term reform and the direction in which the Ministers believed the system could evolve in the future.

The program of immediate action was consistent with the longer-term *Outline of Reform,* constituting in essence a proposed first step in the evolution toward a fundamentally reformed system. It included:

1. Creation of an Interim Committee of the IMF with advisory powers to guide the adjustment process and oversee the operations of the system pending the establishment, through amendment of the IMF *Articles of Agreement,* of a Ministerial Council with decision-making powers.
2. Establishment of a Development Committee, also at the ministerial level, under the joint auspices of the IMF and the International Bank for Reconstruction and Development, to deal with questions relating to the transfer of resources to developing countries.
3. Establishment of guidelines for floating exchange rates.
4. An interim change in the method of valuation of special drawing rights (SDR's) to widen the base for calculating the transactions value of SDR's so that currencies other than the dollar are included.
5. Provision for IMF members to subscribe to a declaration against taking restrictive trade or other current account measures for balance of payments purposes without IMF approval.
6. Improved measures for surveillance of the adjustment process and of developments in global liquidity.
7. A request that the Executive Directors of the IMF prepare a series of amendments to the IMF *Articles of Agreement* for consideration when IMF quotas are reviewed early in 1975.

Among other items on which draft amendments were to be prepared were: establishment of a permanent IMF Council; "legalization" of floating exchange rates; a permanent declaration against trade restrictions for balance of payments purposes; the role of gold; and various modifications of the general and SDR accounts of the IMF.

The longer-term *Outline of Reform* put forward by the C–20 called for a more effective and symmetrical system of adjustment, in which efficient operation of the adjustment mechanism would not be obstructed by controls or restrictions on current or capital account transactions for balance of payments purposes. The *Outline* envisaged that the role of the SDR would be enhanced and that the roles of gold and reserve currencies in international reserves would be reduced. At the end of 1974, the transactions value of SDR's was around $1.22 per unit of SDR.

Recognition that exchange rate flexibility must play a greater part in an efficient economic adjustment process was a key element of the reform

proposals. In sharp contrast to the central role of fixed par values and narrow margins of exchange rate fluctuations around par values in the Bretton Woods system, the *Outline* called for a system in which countries could either establish adjustable par values or allow their currencies to float in response to market forces. Agreement was lacking, however, on the relative roles of floating and par values, the conditions under which the par values would be adjusted, and the provisions for authorization of floating in the future system. The United States favors provisions that would permit a country to float its currency so long as it adhered to internationally agreed rules of conduct, without the need for further authorization or approval by the IMF. Some others favor a more constrained "floating option" under which floating would be limited to specified situations and subject to specific authorization by the IMF.

At its first session during the IMF annual meetings in early October 1974, the new Interim Committee of the IMF approved a work program focusing on energy-related financial problems and balance of payments adjustment in the light of the energy crisis. Pursuant to this work program, the Interim Committee, meeting in mid-January 1975, reached agreement on a broad range of key issues. The Committee agreed on:

1. A limited extension of the IMF oil facility in 1975, with borrowings of up to SDR 5 billion and with an indication that it would be appropriate to make greater use of the Fund's own resources. In conjunction with the Development Committee, the Interim Committee also endorsed a suggestion by the IMF's Managing Director that special provision be made to reduce the interest burden on oil facility borrowing by the poorest developing countries.
2. An IMF quota increase of 32.5 percent overall, "rounded up" to a new quota total of SDR 39 billion, with a doubling of the quota shares of the major oil-exporting countries as a group and no reduction of the collective share of other developing countries. No agreement was recorded on quota shares for other groups or for individual countries. It was agreed, however, that since an important purpose of increasing quotas is to strengthen the Fund's liquidity, arrangements should be made to ensure usability of all IMF currency holdings in accordance with Fund policies.
3. A request that the Executive Directors continue work on a narrowed range of amendments to the IMF *Articles of Agreement* and submit drafts to the Committee on: establishment of the Ministerial Council; legalization of floating; improvements in the general account, including elimination of requirements to make gold payments to the IMF and establishment of arrangements to ensure the usability of IMF currency holdings; and improvements in the characteristics of the SDR.

Progress was made toward agreement on a comprehensive set of amendments on gold, including abolition of the official price and freedom

for national monetary authorities to enter into gold transactions under certain specific arrangements with each other in order to ensure that the role of gold in the international monetary system would be gradually reduced. Additional agreements related to the financial support arrangement among the members of the OECD, described earlier in this chapter, and to other matters.

MANAGED FLOATING

The interim guidelines that have been recommended by the C–20 for the present situation of widespread floating represent a first effort to address in a formal way the complex issues that can arise under a floating system, as well as to develop codes of behavior that might apply under a regime of managed floating over the longer term. Under the guidelines, countries with floating rates may intervene to moderate sharp and disruptive fluctuations from day to day and from week to week in the exchange value of their currencies. Intervention should not be used, however, to moderate movements in the exchange value of any currency over longer periods like months or quarters, unless such official intervention is consistent with actual and expected world market conditions, and unless it accords also with a pattern of exchange rates considered reasonable as a medium-term norm by that country and the international community. For example, a rate of inflation substantially higher than that of a country's main trading partners or competitors would normally lead to expectations of a further depreciation of its currency. In that case, attempts to fix the exchange rate for an extended period, whether undertaken by the country itself or by its trading partners, might be viewed as violating the intent of the guidelines, since intervention for this purpose would be disequilibrating.

Even without imposing direct controls on the flow of goods and capital in international trade, official monetary agencies can modify the course of exchange rates, at least temporarily, under a system of managed floating. The techniques of management can take a variety of forms. The most common is for central banks to intervene in the international money markets by selling domestic currency for foreign currencies, thereby leaning against an appreciation of their currency. Alternately they may engage in the converse operation, possibly with exchange reserves that are supplemented through official borrowing of foreign currencies, to slow a depreciation of their currency. If, however, in the attempt to slow movements of the exchange rate in either direction by "leaning against the wind," intervention continues on the same side of the market for an extended period, the level of the exchange rate may be affected even after intervention has ceased. This would occur if persistent one-sided intervention repressed exchange rate movements substantially. Since any lasting distortion of the exchange rates achieved through one-sided intervention influences the pattern of international trade and investment after a lag, this changed pattern may reflect back on subsequent exchange rate levels.

Foreign Exchange Management Since March 1973

Although attempts to fix the exchange rates of all major countries within narrow ranges vis-a-vis the dollar were officially abandoned in March 1973, a group of European countries agreed on new sets of exchange rates, which they would maintain within 2¼ percent of the agreed parities relative to each other. The United Kingdom and Italy did not join this group, however, and the joint float was further eroded when France withdrew from the group in January 1974. By the end of 1974 only Germany, the Benelux countries, Denmark, Norway, and Sweden floated jointly against the dollar; and some other nations tied their exchange rates to those of other countries. Managed floating had thus become the rule among the industrial countries.

Since the start of generalized floating, the pattern and net amount of official intervention have not been the same as those prevailing before 1973. The direction of official intervention has changed more frequently. As exchange reserve decumulations were followed by accumulations, U.S. liabilities to foreign official institutions were only slightly higher at the end of the third quarter of 1974 than at the end of the first quarter of 1973. From that time until February 1974, the drop in U.S. liabilities to the official agencies of other industrial countries outweighed the increase in liabilities to the OPEC governments, so that total U.S. liabilities actually declined. By comparison, official claims on U.S. residents had more than quadrupled from the end of 1969 to the end of March 1973, and industrial countries accounted for almost all of this increase.

The reserves of industrial countries remained relatively stable, but only because of substantial international borrowing on the part of deficit countries. Some of this borrowing was carried out by the domestic banking system without direct governmental action; in other cases credits were raised by official entities either in the private money market or with foreign monetary authorities. Most deficit countries have used the proceeds of loans from official and private sources to counteract any large decline in their international reserves. Government-to-government loans by surplus countries to deficit countries may be treated as foreign exchange reserves by the former, whether or not they result in marketable claims on the latter. Still there was little growth in the official reserves of industrial surplus countries as exchange rates were allowed to rise to dampen inflows of funds. Specifically, of the countries whose currencies appreciated against the dollar, Canada, Germany, and Switzerland had approximately the same amount of reserves at the end of the third quarter of 1974 as at the end of the first quarter of 1973, and only a few of the countries with depreciating currencies, most notably Japan, lost reserves.

The pattern of reserve movements suggests a change in central bank behavior compared to the period prior to 1973, but a number of countries have continued to influence movements of their exchange rate through indirect forms of intervention in 1974. To slow the rise of its franc,

Switzerland discouraged interest payments on nonresident deposits and maintained higher reserve requirements on nonresident than on resident deposits. In October, Switzerland lifted the interest ban but soon afterwards imposed taxes at the rate of 3 percent per quarter on nonresident deposits in excess of normal working balances, in order to discourage the inflow of funds. Other countries, however, discouraged capital outflows. For instance, France took steps to reduce franc loans to nonresidents, and Japan required the sale of private dollar holdings to the central bank for use in foreign exchange intervention. Among the deficit countries, only Italy imposed direct restrictions affecting international trade and payments when it imposed a 50 percent deposit requirement on most categories of imports in May 1974.

For short periods during 1974 disturbances originating in the private market prevented foreign exchange markets from functioning efficiently. When daily fluctuations in exchange rates become large, and severe losses by various market participants add to the uncertainty, broad participation in the exchange markets may be discouraged and the fulfillment of contracts may become less certain. Risk premiums were raised by the failure of the German Herstatt bank in June 1974 and the disclosure that large losses from private exchange trading had occurred, involving a number of other institutions not only in Germany but also in Switzerland, Britain, Italy, and the United States. Banks were less willing to take foreign exchange positions; and official efforts to discourage participation even further—for instance in Germany—made the markets thinner. Under such conditions markets are less efficient in smoothing out temporary imbalances in spot offerings or in contracts for future delivery, bid-ask spreads are likely to widen, and hence the costs of financing international trade may rise.

On the whole, however, the fact that a number of important exchange rates were no longer fixed brought several distinct advantages. With no formal commitments about exchange rates or margins, the authorities have much more flexibility in dealing with speculative exchange pressures. That is, those interested in shifting funds from one currency to another can no longer make massive purchases or sales of foreign currencies at set prices in a short period and count on the country's monetary authorities' being committed to meeting exchange demands without allowing the rate to move, as was the case in earlier years. Rather, authorities can let their rates adjust to eliminate exchange rate imbalances.

The new system has also enabled countries to manage their money supply with a greater degree of independence. Prior to the adoption of generalized floating there were periodic complaints, particularly from some European countries, that efforts to achieve domestic monetary policy objectives were being overwhelmed by movements in dollar reserves occasioned by the official intervention required to maintain the exchange rates. The system of quasi-fixed exchange rates still existed among the major trading countries at that time; and when the dollar came under pressure, foreign central banks found it difficult to offset the growth in domestic bank reserves resulting

from their dollar purchases. It was therefore argued that inflation was transmitted between countries by reserve asset acquisitions on the part of the surplus countries causing their rates of monetary growth to rise while money supply growth was not allowed to fall symmetrically in the deficit countries. Yet around $30 billion, or over 40 percent of the dollars held by foreign official agencies at the end of March 1973, were acquired after the summer of 1971, when the convertibility of the dollar into gold had already been suspended. In the interim, many countries appeared disinclined to have their currencies appreciate relative to the dollar, thus revealing more concern about promoting exports than avoiding the inflationary consequences of the dollar inflows.

Since March 1973, changes in official reserve holdings have shown no consistent relation to changes in the monetary base of most countries, and official intervention has been entirely discretionary. Hence, even if international reserve flows might have raised the monetary rates of growth more than some countries desired during the period of fixed exchange rates, they cannot have had this effect since that time unless countries chose to make exchange rate objectives paramount.

RECENT EXCHANGE RATE DEVELOPMENTS

Foreign central banks as a group ceased to observe formal intervention limits against the dollar after the international currency exchanges reopened on March 19, 1973, and the dollar declined soon afterwards. After falling through the first week of July, the value of the dollar increased in terms of most foreign currencies through August and then changed little through October.

With the cutback in oil supplies by the OPEC, the dollar soon strengthened relative to all major European currencies and the yen, since it was known that the United States was far less dependent on imported oil than Western Europe or Japan. Not only was the impact of the oil price increase on the U.S. trade balance and the domestic rate of inflation initially expected to be less, but it was widely anticipated abroad that a major share of the additional OPEC revenues would eventually be reinvested in the United States. This market assessment prompted a strong movement of short-term funds into the dollar and out of the major European currencies and the yen. Even though foreign central banks sold dollars to moderate the decline in their currencies, by mid-January the dollar prices of the German mark and the Swiss franc had fallen roughly 20 percent from their peak levels of early July 1973. Other major currencies had also declined sharply, and both the British pound and the Japanese yen were about 15 percent lower. Only the Canadian dollar remained approximately unchanged against the U.S. dollar.

The strengthening of the dollar did not continue past January 1974, because both the arrangement of substantial Eurocurrency loans to finance payments imbalances and the ending of capital controls by the United States began to depress the exchange value of the dollar. During the first half of

1974 the rate of inflation remained considerably lower in both Germany and the Netherlands than in the United States; and the trade surplus of these countries continued while the U.S. trade balance registered increasingly large deficits. The German mark, the Dutch guilder, and the Belgian and Swiss francs appreciated by about 14 percent against the dollar from mid-January to mid-May.

During the first half of 1974 the value of the dollar rose on balance in terms of the currencies of France, Italy, and Japan, because the rise of the dollar in late spring and early summer more than offset any earlier decline. The trade balances of these countries had deteriorated abruptly after the turn of the year, and inflation was much higher than in the United States. In spite of the high rates of inflation prevailing in the United Kingdom, the pound sterling rate deviated from this pattern because of unusually high short- and long-term interest rates in London and because the oil companies had expanding needs for sterling to meet tax and royalty payments to oil-exporting countries.

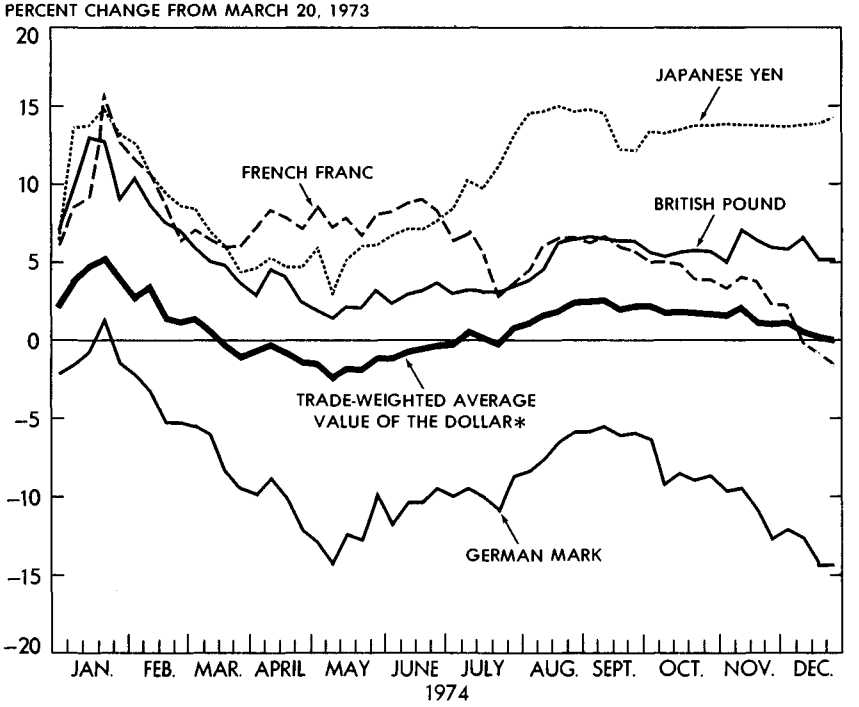
Around the middle of the year the United States and France were implementing some measures to reduce domestic rates of monetary growth in the hope of eventually lowering their rates of inflation, while other countries, particularly Germany, began to shift to more expansionary fiscal policies to combat rising unemployment. The French trade deficit fell and the German surplus declined, but the U.S. deficit grew little from the second to the third quarter. With interest rates reaching record levels in the United States, the dollar steadied or rose against all major currencies except the French and Swiss francs.

During the last quarter of the year, however, the dollar again declined against most currencies. The German mark recovered to its previous peak reached in May 1974, the French franc continued to rise, the Italian lira and British pound appreciated slightly, and only the Japanese yen continued to decline. Toward the end of the year the pound was jolted, but only temporarily, when Saudi Arabia announced that it would abandon its practice of taking about 25 percent of its oil payments in sterling. The effect of this statement was soon softened, however, by the Saudi announcement that it planned to continue investing in the London market. In addition, the Swiss franc rose sharply, by about 17 percent, during the fourth quarter.

Chart 11 shows that for the year as a whole the dollar depreciated against the German mark and the French franc, while it remained approximately unchanged against the British pound and appreciated against the Japanese yen. These movements were far from steady, however, during the course of the year. The Department of the Treasury's index of the change in the value of the U.S. dollar in terms of a trade-weighted basket of 22 foreign currencies indicates that the average value of the dollar declined from the end of January to May 1974; it then recovered most of its earlier losses before slipping again in the fourth quarter. At the end of 1974, the Treasury index

Chart 11

Change in the Value of the U.S. Dollar Relative to Selected Foreign Currencies



*RELATIVE TO THE 22 OECD CURRENCIES; COMPUTED BY DEPARTMENT OF THE TREASURY.
NOTE: FOR INDIVIDUAL CURRENCIES, WEDNESDAY PRICES WERE USED. FOR TRADE-WEIGHTED INDEX, THURSDAY PRICES WERE USED UNTIL JULY 17; THEREAFTER WEDNESDAY PRICES WERE USED.

SOURCE: DEPARTMENT OF THE TREASURY.

shows the value of the dollar to have been about the same as on March 20, 1973, just after the system of managed floating had come into full operation.

CHANGES IN INTERNATIONAL RESERVES

From September 1973 through the end of March 1974, total international reserves grew very little; they subsequently increased by $22.5 billion from the end of March to the end of September (Table 47). All but $3.1 billion of this increase accrued to the OPEC countries, mostly in the form of increased foreign exchange reserves held outside the United States. Thus, while the OPEC countries held a stable 7 percent of the world's reserves from March through September 1973, their holdings had increased to 10 percent by the end of March 1974 and to 18 percent by the end of September 1974. The shift was mainly at the expense of the industrial countries, whose share

568-280 O - 75 - 14

TABLE 47.—*Composition and distribution of international reserve assets, selected months, 1973–74*

Type of reserve asset	Value of reserve assets (billions of U.S. dollars) [1]				Percent of total reserve assets			
	March 1973	September 1973	March 1974	September 1974	March 1973	September 1973	March 1974	September 1974
All countries: [2]								
Total reserve assets	179.2	187.6	187.8	210.3	100	100	100	100
Gold stock	43.2	43.2	43.1	42.4	24	23	23	20
SDR	10.5	10.6	10.6	10.5	6	6	6	5
Reserve position in IMF	7.5	7.5	7.5	9.0	4	4	4	4
Foreign exchange	118.0	126.3	126.5	148.3	66	67	67	71
U.S. liabilities	71.3	69.8	65.5	72.5	40	37	35	34
OPEC countries: [3]								
Total reserve assets	11.9	13.2	19.0	38.4	100	100	100	100
Gold stock	1.4	1.4	1.4	1.4	12	11	8	4
SDR	.4	.4	.4	.4	3	3	2	1
Reserve position in IMF	.3	.4	.4	1.0	3	3	2	3
Foreign exchange	9.8	11.0	16.8	35.6	82	84	88	93
Industrial countries: [4]								
Total reserve assets	120.8	121.2	113.5	117.9	100	100	100	100
Gold stock	35.9	35.9	35.9	35.3	30	30	32	30
SDR	7.9	8.0	8.0	8.0	7	7	7	7
Reserve position in IMF	5.7	5.6	5.4	6.6	5	5	5	6
Foreign exchange	71.3	71.8	64.2	67.9	59	59	57	58
Other countries: [5]								
Total reserve assets	46.6	53.1	55.3	53.9	100	100	100	100
Gold stock	5.8	5.8	5.7	5.7	13	11	10	11
SDR	2.2	2.3	2.3	2.1	5	4	4	4
Reserve position in IMF	1.5	1.6	1.7	1.4	3	3	3	3
Foreign exchange	36.9	43.4	45.6	44.8	79	82	82	83

[1] End of period.
[2] Total of groups of countries listed in this table. Excludes Communist countries except Yugoslavia.
[3] Algeria, Ecuador, Indonesia, Iran, Iraq, Kuwait, Libya, Nigeria, Saudi Arabia, and Venezuela. Qatar and the United Arab Emirates are not included because the IMF does not publish data for these countries.
[4] United States, Canada, Japan, Austria, Norway, Sweden, Switzerland, and all EEC countries except Ireland.
[5] Nonindustrial countries other than OPEC countries.

Note.—Detail may not add to totals because of rounding.

Source: International Monetary Fund (IMF).

of the enlarged global reserves declined from 65 to 56 percent although the dollar value of their reserves did not decline significantly. The share held by the nonindustrial countries outside OPEC fell from 28 to 26 percent.

Globally, the liabilities of the United States and Britain to foreign official institutions have risen little since March 1973, but official holdings by the OPEC countries both in the United States and in the United Kingdom, as well as holdings in the form of Eurodollar and other Eurocurrency claims on private foreigners, have risen rapidly. This increase accounted for most of the growth in international reserves in the second and third quarters of 1974, and it changed the composition of reserves substantially as the share of official claims on private institutions increased relative to claims on other official institutions, including the IMF.

Another shift in the composition of international reserves could occur in 1975 if the quantity or valuation of monetary gold holdings were to change. At the end of September 1974 the industrial countries still owned 83 percent of the world's stock of monetary gold. The price of gold in the

free market has been subject to large fluctuations. At the end of 1974, the London price per ounce was $186½ as compared with $112¼ at the end of 1973. Compared to alternative forms in which international reserves can be held, however, gold yields no interest, nor has it yielded liquidity services in recent years. When the two-tier gold system was adopted in March 1968, central banks agreed to refrain from buying or selling gold in the private market. Neither has it been used in official settlements since the official accounting price fell to a fraction of its free-market price. From February 1973 through June 1974, monetary gold was valued at $42.22 per ounce, while the free-market price was three to four times as high. No significant changes occurred in the distribution of gold reserves from the time that convertibility of the U.S. dollar into gold was suspended officially on August 15, 1971, until the end of 1974.

Several steps have been taken to help countries mobilize their gold holdings to assist in financing balance of payments deficits. Termination of the 1968 two-tier gold agreement in November 1973 permitted countries to sell gold on the private market, although official purchases of gold at prices above the official price of 35 SDR per ounce continued to be prohibited by the IMF. In June, 10 major industrial countries agreed in principle that gold could be used as collateral for international borrowing at a price to be determined by the borrower and the lender. Soon afterwards, Germany extended a $2-billion loan to Italy that was backed by gold valued at approximately $120 per ounce. Later in the year some countries discussed the possibility of valuing monetary gold at market prices, and France indicated that it planned to do so early in 1975. Also in January 1975, the United States sold a small amount of its monetary gold to private purchasers to satisfy demand that might have materialized after removal of the prohibition against private ownership of gold bullion, which had been in effect since 1934. Nevertheless, both the transactions value and the effective liquidity of gold in international reserves remained uncertain at the start of 1975.

From their inception the value of special drawing rights has been set at one ounce of gold equals 35 SDR's. From January 1970 through June 1974, the conversion of SDR's into dollars was made at the official U.S. price of gold. When this official price was raised from $35 to $38 per ounce as of December 1971, the transactions value of 1 SDR therefore rose from par with the dollar to $1.0857, and it rose to $1.20635 after the official price of gold had been raised to $42.22 per ounce in February 1973. In order to enhance the transferability of SDR's and to move away from exclusive reliance on the official dollar price of gold in determining the value of SDR's, the IMF decided to widen the base for calculating the transactions value of SDR's by including currencies other than the dollar after July 1, 1974. Since that date, the currencies of 16 IMF member countries whose export trade amounted to more than 1 percent of the world

total in the 5-year period from 1968 through 1972 have entered into the "standard basket" valuation of the SDR. Countries whose currencies appreciate against the dollar consequently no longer find that the domestic book value of their SDR holdings with the IMF is reduced regardless of whether their currencies depreciate against third currencies that are now included in the standard basket. The relative weight of these currencies in the basket is proportional to each country's share in the world's total exports, but with some modification. Weights do compensate for the fact that the share of exports does not always accurately measure the importance of some currencies in the world economy. This applies particularly to the dollar, whose share is set at 33 percent. However, the standard basket valuation technique adopted in July 1974 represents only an interim agreement without prejudice to a new system of SDR valuation that may be negotiated in 1975.

U.S. INTERNATIONAL TRANSACTIONS IN 1974

The impact of world inflation, recession, and oil-related financing on flows of trade and capital was reflected in the international accounts of the United States in 1974. The physical volume of U.S. exports grew less than in the previous year because of the slowdown in economic growth in many foreign countries. Higher import prices, particularly for oil, led to a sharply higher value of U.S. imports despite a slightly decreased physical volume. These trends combined to push the merchandise trade account into deficit in 1974, after a surplus in 1973. In the monetary arena, the U.S. financial system was called upon to play a major role as intermediary, since U.S. capital markets were an important depository of the oil revenues which the foreign producers could not spend on imports from oil-consuming nations.

Merchandise Trade

The increasing deficit in the trade account during 1974 came after a strengthening of the U.S. trade position in the previous year. Cumulative depreciation of the dollar, combined with special factors such as shortfalls in foreign crop production and domestic price controls, produced a trade surplus in 1973. This surplus declined in January and February of 1974, and in March the United States registered the first deficit since June 1973.

During the first 3 quarters of 1974 the United States imported $4.3 billion more than it exported, and by the third quarter the quarterly trade deficit had risen to $2.6 billion. Although both imports and exports rose in current dollars, price increases were greater for the imported goods than for exports. As indicated in Table 48, from the first 3 quarters of 1973 to the first 3 quarters of 1974, the value of all merchandise exports grew 42 percent, and the value of imports 48 percent. The more rapid growth in the value of imports is attributable largely to the sharp rise in the price of imported oil; the value of all other imports increased only 24 percent during the year. The effect of higher oil prices is reflected in the 17

percent decline in the U.S. terms of trade from the pre-embargo third quarter of 1973 to the third quarter of 1974.

Table 48 also presents percentage changes in trade volume. The volume of exports was 11 percent greater in the first 9 months of 1974 than in the same period in 1973. While the rate of increase was less than in the preceding year, it was still remarkably high in view of the weakening world economy. Imports in constant dollars actually declined 1 percent in response to both the general decline in U.S. demand and the higher relative prices of imported goods.

TABLE 48.—*U.S. merchandise trade by principal end use categories, 1973–74*

Category	Value 1st 9 months 1974 (billions of dollars) [1]		Percent change, 1st 9 months 1973 to 1st 9 months 1974 [2]			
			Value		Volume	
	Exports	Imports	Exports	Imports	Exports	Imports
Total	71.0	75.3	42	48	11	−1
Agricultural goods	16.7	7.8	33	28	−6	−3
Nonagricultural goods	54.3	67.4	45	51	17	0
Foods, feeds, and beverages	13.8	8.0	31	22	−8	−2
Industrial supplies	22.6	38.4	60	95	10	−4
Petroleum and products	.6	18.8	48	250	−19	−3
Capital goods, except autos	21.5	7.0	39	23	21	10
Automobiles and parts	5.8	8.9	27	17	14	9
Consumer goods	4.7	11.0	39	12	29	−10
All other	2.6	2.0	33	35	.....	.....

[1] Seasonally adjusted; detail may not add to totals because of rounding.
[2] Based on seasonally adjusted data.

Note.—Bureau of the Census trade data have been reconciled to balance of payments basis.

Source: Department of Commerce (Bureau of the Census and Bureau of Economic Analysis).

Considering the value of exports by major categories, agricultural items rose, but solely because of higher prices. World production of grains during 1974 declined for the second time in 3 years, reducing the available supply and driving up the price. The major food-exporting countries suffered declines in output. The shortfall in the United States—where late planting, summer drought, and early frost led to a 20 percent decline in feed grain production—had a major impact on world prices.

Exports of industrial materials, particularly coal, paper, and steel, remained strong throughout the first 3 quarters of 1974 despite the worldwide slowdown in economic growth. Exports of capital goods remained especially strong in the first 9 months of 1974; sales in this category were sustained by a continued demand from abroad for specialized equipment such as computers and machinery used in construction, mining, agriculture, and communications.

Imports were influenced by many of the same factors as exports, particularly by higher prices. Oil was the major cause of increases in import value, although volume in this commodity declined 3 percent. Despite the weakening U.S. economy, strong demand for capital goods throughout the first 3

quarters resulted in a 10 percent volume increase in this category compared to the same period the year before.

Services

Investment income, the major component of the services account, rose in the first 9 months of 1974 compared to the same period a year earlier. Higher earnings among foreign affiliates of U.S. oil companies accounted for most of the rise, but this effect was partially offset by the impact of foreign takeovers on the U.S. capital account. Interest income from loans to foreign borrowers increased because of higher U.S. rates and larger loan volume, but this effect too was countered by higher rates abroad and by the increase in U.S. liabilities to foreigners.

Long-Term Private Capital Flows

The net outflow of total long-term capital was $0.5 billion in the first 9 months of 1974, compared to an inflow of $0.8 billion in the same period a year earlier.

TABLE 49.—*U.S. balance of payments transactions, 1973–74*

[Billions of dollars; seasonally adjusted]

Type of transaction	First 3 quarters		1973 IV	1974		
	1973	1974		I	II	III
Goods [1]	−0.7	−4.3	1.2	−0.1	−1.6	−2.6
Services [1]	2.3	6.6	1.5	3.0	1.4	2.2
Military transactions	−2.1	−1.6	−.1	−.5	−.7	−.5
Investment income [2]	3.9	7.1	1.4	3.1	1.8	2.2
Other [3]	.6	1.1	.3	.4	.3	.5
GOODS AND SERVICES	1.6	2.4	2.7	2.9	−.2	−.3
Unilateral transfers, net [4]	−2.7	−6.1	−1.2	−3.0	−1.9	−1.2
CURRENT ACCOUNT	−1.1	−3.7	1.6	−.1	−2.1	−1.6
Long-term capital	.8	−.5	−2.3	1.8	−.4	−2.0
U.S. Government [5]	−.7	1.9	−.9	1.3	.6	.0
Direct investment	−1.7	−1.2	−.7	.7	.2	−2.0
Other private	3.2	−1.2	−.8	−.1	−1.1	.0
CURRENT ACCOUNT and LONG-TERM CAPITAL	−.3	−4.3	−.7	1.8	−2.5	−3.6
Nonliquid short-term private capital, net	−3.0	−11.1	−1.3	−4.0	−5.4	−1.7
Errors and omissions	−3.4	3.6	1.1	1.1	1.7	.8
NET LIQUIDITY BALANCE	−6.7	−11.7	−.9	−1.1	−6.2	−4.5
Liquid private capital, net	−1.2	7.9	3.5	2.1	1.7	4.1
OFFICIAL RESERVE TRANSACTIONS BALANCE	−8.0	−3.8	2.7	1.0	−4.5	−.3
Financed by:						
Liabilities to foreign official agencies	7.7	5.4	−2.6	−.8	4.9	1.3
U.S. official reserve assets	.2	−1.6	.0	−.2	−.4	−1.0

[1] Excludes military grants of goods and services.
[2] Excludes direct investment fees and royalties, included under other.
[3] Includes travel and transportation and other services, net.
[4] Excludes transfers under military grants.
[5] Excludes official reserve transactions and includes transactions in some short-term U.S. Government assets.

Note.—Detail may not add to totals because of rounding.

Sources: Department of Commerce, Bureau of Economic Analysis.

Much of the turnaround represents reductions in purchases of U.S. stocks and bonds by foreign investors, traceable to the poor outlook for stock and bond prices during much of 1974. Although foreign purchases of U.S. equities declined, foreign direct investment in the United States increased; takeovers involving U.S. corporations engaged in petroleum operations abroad accounted for much of the increase. There was also a substantial rise in U.S. residents' purchases of foreign securities, primarily bonds issued by Canada. Despite the January 1974 removal of the Interest Equalization Tax, purchases of other foreign securities showed little change from 1973. Bank loans to foreigners reflected the greater demand for credit to finance higher oil bills, and they contributed to the outflow of long-term capital.

Short-Term Private Capital Flows

During 1974 there were substantial inflows of private capital into readily marketable assets. At the same time, large outflows of short-term capital took place in the form of bank loans and acceptance credits. Net nonliquid short-term private capital outflow was $11.1 billion in the first 9 months of 1974, $8.1 billion more than in 1973. Nonliquid claims on foreigners increased sharply in the first 2 quarters of the year, but the increase was reduced in the third quarter. The large outflow in the first part of the year was a reflection of the removal of restrictions on foreign lending by U.S. banks in January 1974. The diminished outflow later in the year may be attributable to higher U.S. interest rates.

Official Capital Flows

Official agencies of foreign governments purchased $5.4 billion of U.S. assets during the first 3 quarters of 1974. Since OPEC government purchases during the period are estimated at $7.2 billion, liabilities to official agencies of other nations declined during this time by $1.8 billion. The preference for U.S. dollar reserves revealed by the official agencies of oil-exporting countries has implications for the U.S. balance of payments measures discussed below.

The Net Asset Position of the United States

Figures compiled during 1974 indicate that U.S. net assets increased during 1973 by $11.8 billion, after declining $6.4 billion in 1972 and $11.5 billion in 1971. The value of U.S. assets abroad at the end of 1973 was $226 billion, compared to $163 billion in U.S. liabilities to foreigners.

The net asset position is affected not merely by balance of payments transactions, but also by factors not included in the balance of payments accounts. For instance, earnings reinvested by U.S. firms abroad (less earnings reinvested by foreign firms in the United States) added more than $7 billion to the net asset position during 1973. Adjustments for price changes in the foreign securities held by U.S. residents and in the U.S. securities held by foreign residents also affect the net asset position. Data on reinvested earnings and valuation adjustments for 1974 are not yet available.

THE BALANCES

Under the regime of fixed exchange rates, foreign monetary authorities were required to intervene in foreign exchange markets to maintain the value of their currency within a narrow band. A deficit in the official reserve transactions balance of the United States then indicated that foreign central banks had purchased dollars, because at the parity rates (plus or minus a narrow margin) the private demand for dollar holdings by foreigners had been less than the available supply. The accumulation of these assets by foreign monetary authorities was taken as a gauge of pressure on the dollar in foreign exchange markets.

The net liquidity balance, which takes into account the net change in liquid liabilities to private parties as well as to official agencies in other countries, was designed as a broader indicator of potential as well as actual pressures on the U.S. currency.

The trend toward flexible exchange rates has made these two measures of the balance of payments unsuitable for analyzing exchange rate pressures. Since intervention has become discretionary, pressures on exchange rates are in large part allowed to move the exchange rates instead of being reflected in reserve movements. While official intervention under managed floating can be used to dampen exchange rate fluctuations, the balances do not serve as acceptable indicators even of these limited actions to remove pressure.

Because of the huge surplus of investable funds accruing to the oil-exporting countries, a large negative shift in the U.S. official reserve transactions balance can now result on account of the preference of the oil-exporting countries for placing their funds in the United States. Moreover, the net liquidity balance is far less significant than under the regime of fixed exchange rates, since the foreign central banks are not obligated to acquire dollars from private holders. Finally, the distinctions between liquid and nonliquid assets and liabilities and between private and official foreign exchange assets have become increasingly blurred.

Thus, reliance on these balances could lead to serious analytical misjudgments. The question of how the organization of our balance of payments data can be made more useful is currently under review.

SUPPLEMENT

The Eurocurrency and Eurodollar Markets

The discussion of the international financial aspects of the "energy crisis" brought into public focus the Eurodollar market as an important channel for moving funds from the oil-exporting countries to borrowers. The recycling of "petro-dollars" has been merely one of many functions performed by the Eurodollar market over the years of its existence.

The Eurodollar market, as such, has no specific location. Its physical dimension is a network of international telecommunications media which link financial centers around the world and through which Eurodollar transactions are conducted. Eurodollars are dollar-denominated claims on commerical banks located outside the United States, largely but not exclusively in Europe. They are dollar funds placed with foreign banks by either U.S. or foreign residents, and maintained on the books of these banks as dollar-denominated liabilities to the depositors. Dollars deposited with the foreign banks may be in the form of U.S. currency, but they seldom are. In virtually all instances, they are dollars held on deposit in U.S. banks. In establishing a Eurodollar deposit, the depositor, in effect, transfers the ownership of his deposit in a U.S. bank to the receiving foreign bank. When the foreign bank lends these dollars, it transfers their ownership to the borrower. Finally, when the original depositor "withdraws" the deposit, he in effect exchanges the dollar-denominated claim on the foreign bank for a dollar-denominated claim on a U.S. bank.

Eurodollars, while by far the largest, are merely one of several types of foreign-currency denominated deposits maintained by commercial banks around the world in currencies other than that of the country where the bank is located. Deposits denominated in British pounds (Eurosterling), German marks (Euromarks), Swiss francs (Eurofrancs), and others are also held and traded by banks domiciled outside the countries issuing these currencies.

The emergence and growth of the Eurodollar market may be viewed as a classic example of free market forces at work, overcoming obstacles created by regulations, and responding to market incentives to accommodate various needs. After World War II, when the dollar emerged as the major trading currency, the initial impetus to the growth of the Eurodollar market was given by certain Eastern European countries. Anxious to hold dollars to finance their badly needed imports from the West, but concerned that their dollar balances might be blocked or confiscated in retaliation for their expropriation of American-owned properties if such balances were held in banks under U.S. Government jurisdiction, these countries began placing their dollar balances with commercial banks in Western Europe. Since the late fifties, when most major countries removed restrictions on the holding of foreign exchange (including dollars) by their residents, higher interest rates offered by foreign banks, relative to interest rates offered by the U.S. banks, provided the main incentive for holders of dollar funds to place these with foreign banks rather than banks located in the United States.

The ability and willingness of foreign banks to offer a more attractive return than U.S. banks has been predicated on several factors. The U.S. banking authorities do not allow commercial banks in the United States to pay interest on deposits of less than 30 days, and they regulate the rate of interest that may be paid on deposits of longer maturity. Commercial banks abroad

are mostly exempt from such restrictions. Also, unlike U.S. banks, commercial banks in countries where the growth of the Eurodollar market has been the most spectacular are not subject to reserve requirements on their dollar-denominated liabilities. As a result, the net cost of such funds to these banks is reduced, and they can offer a higher yield. On the other hand, the willingness of foreign banks to offer a higher return has been predicated on the strong demand for dollar loans that has not been fully met by the U.S.-based banks, particularly when such lending was impeded by the existence of the Voluntary Foreign Credit Restraint Program and the Interest Equalization Tax.

Given these constraints, the U.S.-based banks were able to compete for dollar deposits with foreign-based banks through foreign subsidiaries and branches that were not subject to the same restraints as their parent institutions in the United States. Through these media, the U.S. banks have maintained significant participation in the Eurodollar market. The elimination or suspension of certain U.S. regulations in 1970 and 1974 has removed most of the impediments to the direct participation of U.S. banks in the global trade in dollars. By this time, however, the Eurodollar market had acquired a momentum of its own that assured its continued existence for years to come.

MEASURING THE SIZE OF THE EURODOLLAR MARKET

For a number of years, the Bank for International Settlements (BIS) in Basle, Switzerland, has been providing the most comprehensive set of statistics on the Eurodollar market, based on reports of foreign-currency denominated assets and liabilities of commercial banks in Belgium-Luxembourg, France, Germany, Italy, the Netherlands, Sweden, Switzerland, the United Kingdom, Canada, and Japan. The original reports include all foreign-currency denominated liabilities to residents (banks, individuals, and corporations) of countries other than the country in which the reporting bank is located, that is, all external liabilities. These totals are published as gross Eurocurrency positions.

Table 50 shows the size of the external Eurocurrency liabilities by the individual reporting countries. For the end of 1973, the BIS reported that total external liabilities in foreign currencies of banks in the reporting European countries identified in the table amounted to $191 billion; roughly two-thirds of these liabilities were denominated in dollars.

TABLE 50.—*External liabilities denominated in foreign currencies of banks in selected countries, 1970–73*

[Billions of U.S. dollars; end of period]

Country	1970	1971	1972	1973
Selected countries	85.8	110.8	147.5	215.7
Reporting European countries	75.3	97.9	131.9	191.4
Belgium-Luxembourg	6.8	10.5	14.8	24.0
France	9.2	13.9	19.2	27.2
Germany	2.9	3.1	4.0	5.8
Italy	9.4	12.4	18.8	24.1
Netherlands	4.0	4.9	6.4	9.6
Sweden	.5	.6	.7	.9
Switzerland	6.1	6.5	8.5	9.2
United Kingdom	36.4	45.9	59.8	90.7
Canada	5.5	6.3	8.1	11.5
Japan	5.0	6.6	7.5	12.8

Note.—Detail may not add to totals because of rounding.

Source: Bank for International Settlements.

In addition to gross figures, the BIS publishes data on net Eurocurrency liabilities. The net liability measure is an estimate of the amount of credit outstanding in the Eurocurrency market, after an adjustment to exclude interbank deposits. Deposits by one Eurobank at another are made for several reasons. First, banks usually observe limits on loans to particular borrowers or markets. When limits are reached, many banks will lend to another bank which wants to increase the supply of loans to its nonbank borrowers. A second reason is that many banks whose lending is specialized by either function or region will supply funds to another intermediary for more general operations. The redepositing gives rise to double counting when the same funds pass through several banks on their way to final borrowers. The practice of the BIS has been to net out of the gross figure all interbank deposits within the reporting area, on the assumption that they result in duplication along the credit chain. Interbank deposits between this area and the areas not covered by the BIS reports, however, are assumed to derive from actual credit flows initiated by nonbank market participants and carried out by the banking intermediaries. Thus, interbank deposits between banks within the European countries comprising the reporting area are excluded, while deposits of banks outside the area are included in the net measure. Also included in the net measure are Eurocurrency liabilities of the area banks to the residents of the country in which the bank is located. On this net basis, the BIS had estimated the size of the Eurocurrency market at $132 billion in the reporting European countries at the end of 1973. Of that total the Eurodollar component was estimated at $97 billion.

In recent years banks in other financial centers such as Singapore and the Bahamas sharply increased their Eurocurrency deposits. Data on these liabilities are not included in the BIS figures. However, the Morgan Guaranty

Trust Company of New York, utilizing published national banking statistics of various countries, has been compiling data on the world Eurocurrency market. According to their estimates, the gross foreign currency liabilities of banks around the world (including interbank deposits and foreign-currency denominated liabilities to residents) amounted to $295 billion at the end of 1973. Of the world total, $215 billion were Eurodollar deposits; about $80 billion of these were held at foreign branches of U.S. banks. After an adjustment for double counting resulting from interbank deposits, the net size of the world Eurocurrency market at the end of 1973 was estimated by Morgan Guaranty at $155 billion, of which $115 billion consisted of liabilities denominated in U.S. dollars.

In the first 3 quarters of 1974 the world Eurocurrency market expanded considerably. On a net basis it has been estimated that the deposits rose globally by some $35 billion, from $155 billion at the end of 1973 to $190 billion at the end of September 1974. A large portion of that increase apparently took place at banks in the United Kingdom where gross Eurocurrency deposits rose by $16 billion to $106 billion.

Receiving foreign currency deposits and establishing foreign-currency denominated liabilities is, of course, only one side of the Eurobanks' activities. Lending the funds received and establishing foreign-currency denominated claims represents the other phase of their operations. The BIS also collects and publishes data on the asset side of the balance sheet of Eurobanks for the European countries comprising the reporting area. Table 51 shows the distribution of such assets around the world.

TABLE 51.—*Foreign-currency denominated claims of banks in reporting European countries, 1973*

[Billions of dollars [1]; end of 1973]

Area and country	Foreign-currency denominated claims		
	Total	Dollars	All other currencies
Claims on residents of			
Reporting European countries [2]	106.6	67.3	39.3
Other areas	81.3	66.5	14.8
Other Western Europe	11.4	6.6	4.8
Eastern Europe	7.8	4.9	2.9
Canada	5.1	4.4	.7
Japan	8.1	7.5	.6
Latin America	11.3	10.3	1.0
Middle East	2.5	2.0	.5
United States	14.5	13.8	.7
Other	21.6	17.0	3.7

[1] Foreign currencies expressed in billions of U.S. dollars.
[2] Belgium-Luxembourg, France, Germany, Italy, Netherlands, Sweden, Switzerland, and United Kingdom.

Note.—Detail may not add to totals because of rounding.

Source: Bank for International Settlements.

Eurodollars are not included in the U.S. monetary aggregates (M_1, M_2, M_3); only dollars held by foreigners as currency or as deposits in U.S. banking institutions are included. Indeed, Eurodollar deposits must first be "converted" into deposits in U.S. banks before they can become means of payment in the United States. In general, such "conversion" has no impact on the U.S. money supply. On the other hand, owners of Eurodollar deposits undoubtedly consider them highly liquid dollar-denominated assets, and some degree of arbitrariness inevitably enters into distinctions between such assets and money.