PRICE AND WAGE CONTROL: AN EVALUATION OF CURRENT POLICIES

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NOTE

The papers included in this volume were prepared at the special request of the Joint Economic Committee for inclusion in the record of its hearings evaluating the price and wage control program. The views contained in these papers are those of the individual authors and do not necessarily represent the views of the members of the com mittee or of the committee staff.

The committee is indebted to the authors and to Dr. Julius Allen of the Congressional Research Service, Library of Congress for editing the papers and preparing the introduction.

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INTRODUCTION AND SUMMARY

By JULIUS W. ALLEN*

This compendium of 11 papers deals with some of the major issues that will be before the Congress in the course of deliberations on the future of price and wage control, deliberations which must be an early order of business in the 93d Congress since the legal authorization for the present controls will expire on April 30, 1973.

In general the first six papers focus on various aspects of price control and the next four on wage control, with the final paper being a general overview of anti-inflation policy of the United States since the end of World War II. Obviously, as many of the papers demonstrate, price control and wage control cannot be considered in isolation from each other, and considerable overlapping is to be expected. In a symposium of this kind, the breadth of scope of individual papers will vary appreciably. Some are more concerned with broad areas of market and labor power as they relate to controls, while others deal with narrower issues, such as price control in regulated industries, cost-of-living escalators, and fringe benefits in employee compensation. All of the papers provide insights into particular problem areas that both legislators and administrators will want to take into account in formulating the future direction of controls in the economy.

By no means all of the key issues in wage and price control are explicitly included among these papers. For example, relatively little emphasis is placed on rent control or possible control of interest rates, profits, and dividends. This in no sense minimizes the importance of such issues, which are receiving extensive consideration in the press and elsewhere. This compendium is intended not as a comprehensive evaluation of all aspects of the control program but as an attempt to focus more attention on issues which may have been unduly neglected and warrant more serious attention than has been shown them thus far.

In the first paper, Roger Bezdek of the University of Illinois presents an evaluation of the major price and productivity indicators that are the basic yardsticks for the entire price and wage control effort. The assurances he provides are mixed at best. He reviews the following price indexes: the Consumer Price Index, the Wholesale Price Index, the Implicit Price Deflator, and the construction price indexes. Of these only the Consumer Price Index receives fairly high marks in his overall assessment, and even here he recognizes its obvious weaknesses. As he says, "The CPI is deserving of a high degree of confidence by the Government and consumers." Since this is the most visible and widely used index for measurement of inflation and in wage negotiations, as is particularly evident in Lily Mary David's paper on cost-of-living escalators, Bezdek's confidence is encouraging. However, he is highly critical of the other indexes. The

*Congressional Research Service, Library of Congress.

Wholesale Price Index lacks sufficient sector coverage, contains deficiencies in its basic data and price quotations and lacks a theoretical framework. Construction indexes are "of exceptionally poor quality." The Implicit Price Deflator is especially deficient in its handling of the Government sector, and suffers from its necessary reliance on the other indexes of which it is a composite.

There is similar unevenness in the productivity data. Bezdek finds that for the manufacturing sector of the economy, as a whole and in its major components, reliable measures of productivity are available. Thus he feels able to conclude that "we do have the capability of measuring prices and productivity accurately enough to make feasible the type of general wage-price control program now in effect."

But serious gaps remain. Productivity measures of individual (Standard Industrial Classification 4-digit) industries are sufficiently unreliable as to question whether their use is appropriate in the development of price-wage controls. Bezdek suggests alternatively that use of productivity guidelines be formulated in terms of more aggregate industry groupings, or that detailed study of productivity be concentrated in specific critical or problem industries in the economy.

Outside of manufacturing productivity measures are poor. "For government, construction and services accurate and reliable productivity estimates are not presently available." In view of the rapid growth of these segments of the economy, both absolutely and relatively compared to manufacturing, this deficiency may be a serious obstacle to a fair administration of wage and price control.

William G. Shepherd argues that the price-wage control program has been peripheral to meeting the core of the inflation-recession problem, which he sees as one of market power. He suggests: "The available policy tools are not being used. Even if they were they would probably be insufficient. A new variety of treatments is needed, to fill the present policy vacuum." Shepherd holds that the extent of concentrated market power is, if not rising, clearly persistent. He cites particularly such industries as automobiles, telephone equipment, computers, soaps, electrical equipment, power, communications, transport utilities, and major financial institutions as possessing a high degree of market power. Such power has the consequences of higher prices, excess profits, increase in inequality of wealth, lower efficiency, and narrower and disequalized opportunity.

The evidence suggests that present antitrust and price control policies are not being effective in exerting significant pressure on prices in industries with significant market power or in overcoming "stagflation." Profits by firms in these industries, Shepherd argues, are in fact legitimatized by the Price Commission. Among the steps which he believes should be taken would be the following: (1) Concentrating antitrust action on market leaders rather than on lesser firms and industries; (2) establishment of an Industrial Reorganization Commission, as proposed by Senator Philip Hart in S. 3832, 92d Congress, which would have power to reorganize industries, so as to make them more competitive; (3) creation of a publicly funded performance investment bank which would be able to acquire partial holdings (20 percent would usually suffice) in firms with market power which are not accessible to other treatments, and thus to influence management policy and publicize inferior performance, (4) reduction of international trade barriers, (5) using monopsony power of the Government

to force lower prices in a wide range of purchases for public groups; and (6) profit regulation.

In short, Shepherd suggests that the price control mechanisms now being employed "permit, rather than limit, the pre-existing degree of profitability in these and other industries." They are thus weak medicine, if medicine at all. Shepherd's analysis may also be interpreted as providing one explanation for the lack of resistance to, in fact a considerable degree of support for, price controls as currently administered by many segments of the business community. Such controls are in general evidently not pressing hard on them and are, in fact, largely permitting them to carry on business pretty much as usual. But the corollary is that they are not being very effective in reducing market power, reducing prices, or in increasing output and employment as much as would occur if greater competition in the economy prevailed.

Roger Noll takes a similarly critical position of the Price Commission, for its policy of delegating nearly all of its authority to control public utility prices to the numerous State and Federal regulatory agencies. Most such agencies have taken a weak stand with respect to the price increases requested by the respective utilities they are charged to regulate, with little if any consideration for their responsibility to contribute towards stable prices or to protect consumer interest. He concludes: "Most scholars who have examined the performance of regulatory agencies agree that the Price Commission has picked an especially weak governmental institution to which to delegate its power to control utility prices. . . . The Price Commission has chosen to all but exempt from the control program a sector that has performed poorly over the past few years. One can only condone this action if one believes that the entire control program should be dismantled and that the public utility policy is simply a good first step."

At the very least, Noll maintains, the Price Commission should have retained oversight over price control of utilities to see that certain minimum standards, parallel to those imposed on other firms, are maintained. The very existence of such a Price Commission review authority for increases that raise serious questions of conformity with the overall control program would limit the number and size of utility requests for price increases.

Thus in weighing the future of price control, the Congress should, these two papers imply, consider the extent to which current Price Commission policy and procedures are based on minimum interference with existing business patterns and to what extent it is letting that emphasis interfere with its mission of keeping price increases to a practical minimum.

While price and wage controls generally have been accepted with relatively greater equanimity than many would have anticipated a year ago, a major exception to this acceptance is to be found in food prices. Reasons for this disaffection lie close at hand. These prices are probably the most visible of all for the average consumer in his daily, or weekly, purchases. Farm prices have been exempt from controls. Food prices have fluctuated more than most others, due to factors such as the weather, increases in demand, particularly for beef, faster than supply can be increased, exports of grain larger than had been anticipated, and labor disputes in transport and other industries. At the same time, a more comprehensive price control of food would

be difficult to implement without rationing, and relatively easy to circumvent, considering the large number of competitive units involved in the production, processing, and marketing of food. There is also good reason to believe, as George Brandow points out in his paper, that more comprehensive price controls may be unnecessary on economic as well as administrative grounds.

After an analysis of food prices by major food sector, Brandow estimates that, assuming the absence of abnormally adverse weather, no unusual foreign purchases such as those recently made by Russia, but with continuing gradual price rises in labor and nonfood materials in producing, processing and distributing food, the index of retail prices of all foods will rise at a slightly slower rate than the rate of inflation for the remainder of the economy in 1973 and 1974, assuming no controls. He realizes that these "all food" estimates could be wrong by 1 to 2 full percentage points even if the assumptions are borne out in actual experience. The projected rate of increase in 1973 is about 1 percentage point less than actually occurred in the preceding year. A principal reason for this relatively optimistic forecast is the assumption that farm prices of feed grains and milk will be nearly stable under government programs. Brandow stresses that government programs for farm price support and supply management can be utilized for price stabilization and can have a significant effect on retail food prices.

Brandow points out the difficulties of imposing food price ceilings on commodities like meat, since the quantity of such commodities brought to market depends largely on farmers' earlier decisions about production. If price ceilings induce farmers to reduce production for a later year, the impact could be severe. Effective profit margin control might help to stabilize markets for individual products but is unlikely to have a discernible effect on consumers' total food bills. The most feasible ways of dampening price rises in foods would seem to be those that in one way or another would increase supply. Thus, Brandow suggests that to meet rising demand for beef, it may be desirable to permit farmers to graze livestock on acres "set aside" or withdrawn from crop production under the control programs and to reduce payments for setting aside acreage when the grazing option is chosen. Import restrictions, such as on meat and sugar, could be lowered. Where possible increases in efficiency in food production, processing, and distribution should be attempted. However it must be recognized that measures to protect the environment and to increase food safety may be offsetting tendencies that may raise food prices. In conclusion, Brandow is not sanguine about food price controls as a solution of the problems of price stabilization.

Irving Siegel in his paper explores the thesis that greater than average productivity in some industries should permit actual price reductions and suggests means to encourage such reductions. He uses as basic data analyses of productivity trends made by the Bureau of Labor Statistics covering the period 1958 to 1970 and by the Price Commission for the years 1958–69.[1] He cites, for example, over 30 industries shown by the Price Commission data as having average annual productivity increases of 5 percent or more between 1958 and 1969. These include, among others, brewing, women's hosiery, indus-

[1] For a criticism of these Price Commission data, see the paper by Roger Bezdek.

trial organic chemicals, plastics materials, medicinals and botanicals, petroleum refining, radio and television receivers, picture tubes, and semiconductors. In a number of these industries, prices declined significantly between 1958 and 1970. For example plastic materials prices declined by 30 percent, industrial organic chemicals by 18 percent, medicinals and botanicals by 25 percent, radio and television receivers by 22 percent, and picture tubes by 46 percent.

However, as Siegel cautions, "previous productivity and price experience provides no sure clue to the areas ripe for price-cutting." Good past price performance may not be sustainable, for example in the face of unexpectedly large wage settlement. It should also be acknowledged that there are cases in which better than average productivity increases have not entailed either price stability or price decline, and others when unfavorable productivity performance has occurred together with acceptable or better price performance. Nor should past poor performance in raising productivity preclude substantial improvement in the present or future. The lack of appreciable productivity gains in the motor vehicle and steel industries, for example, can hardly be accepted with complacency by management unions, or the public.

Siegel lists the following policy possibilities for encouraging price-cutting:

(1) Tax and other incentives for upgrading technology and transforming it into physical plant and equipment.

(2) Encouraging workers to forego demands for pay increases greater than productivity gains by the offer of purchasing power protection where pay increases stay within bounds of productivity gains. The cost-of-living escalation provisions discussed in the paper by Lily Mary David are one of the means of achieving this objective. Siegel also makes suggestions for wage-deferment bonds and tax write-offs to this end. "For symmetry, tax-benefits could be offered to companies that voluntarily share their productivity gains with the public in the form of lower prices."

(3) The actions of the Price Commission, which have brought about both "voluntary" and "ordered" price cuts to bring about compliance with its profit margin limitations.

(4) A Price-Wage Review Board, which would publicize proposed increases of prices, or maintenance of prices at unjustifiable levels, by major corporations dominating key industries, as proposed by, among others, Walter Reuther in 1966.

(5) A consumer protection agency which could represent the consumer viewpoint in wage-price hearings and exert pressures on prices where productivity gains would justify lowering prices.

Robert H. Haveman and Thad W. Mirer, of the Institute for Research on Poverty at the University of Wisconsin, provide insight into how the wage-price control program might be utilized to reduce and ameliorate poverty. Although pointing out serious deficiencies of wage-price control in principle, Haveman and Mirer do suggest ways in which the wage-price control mechanism can be utilized to improve income distribution, specifically to raise lower income levels.

They express strong doubts that control decisions by and large will have any appreciable effect on the real income level of those at the poverty level. This is due to the fact that a large proportion of such families (45 percent in 1970) have little or no income from labor

or property. "Moreover, although the poor tend to concentrate their expenditures on different commodities or services than other groups, the difficulty of altering specific commodity prices for this purpose—together with the low target efficiency of such price changes—suggests the ineffectiveness of such a strategy."

Outside of the price control mechanism, they of course recognize lowering unemployment as a course that would have a major effect on income redistribution. The impact of inflation is more difficult to discern with confidence. Haveman and Mirer point out, for example, that "while increases in the consumer price level have often been viewed as falling more heavily on low income families, this result seems neither general nor inevitable," citing studies of Hyman Minsky and the Institute of Government and Public Affairs of the University of California in Los Angeles.

The authors discuss profit control and selective commodity price control (e.g., restricting prices of basic commodities used by the poor while permitting luxury and related commodities to increase at their natural rates), but recognize the practical difficulties in administering such controls, particularly the latter. Thus wage controls, they believe, must receive primary attention if the control mechanism is to be used to reduce the inequality of income distribution. Although they recognize institutional pressures that would make their implementation difficult, Haveman and Mirer make the following recommendations the central focus of their paper:

(1) Establishing ceilings on the growth of profits such that the overall effect of the price controls system is to decrease the ratio of property income to labor income.

(2) Permitting wage increases for low wage workers to be higher than the increases allowed them under a neutral policy, and constraining wage increases for high wage workers to be lower than those allowed by a neutral policy.

As just noted, Haveman and Mirer in their paper express the skepticism, probably shared by most economists, about the desirability of maintaining price and wage controls, recognizing that the longer they are continued, the more serious will be the distortions and misallocations of resources that will occur, and the more danger will be incurred from increased governmental authority over the economy and from the size of the administrative task. At the same time, as many observers have pointed out, there is the prospect of a number of major labor contracts involving some of the largest unions and over 4 million employees expiring in 1973, and the likely push for sizeable wage and benefit boosts on the part of powerful unions. This makes a strong case for continuing at least the major part of the present wage and price control program. And this, in essence, is the conclusion reached by Frank Pierson in his paper which focuses on the 1973 wage negotiations. He concludes basically that it would be imprudent to eliminate wage-price controls in the immediate future. "Once the essential elements of a control program have been worked out, there are important advantages in keeping its general scope unchanged until the time has come for eliminating it altogether."

Pierson notes that, in terms of the wage-price control program, the most significant negotiations will occur in the second quarter of 1973, with particular importance attached to those between the United Rubber Workers and the major tire companies. Considering the latitude provided by Pay Board standards and policies, there is a good

chance that most settlements will fall within the presently allowable raises. He concludes that: "If the key settlements can be held to roughly the pattern of major bargaining increases that were secured in 1972, a strong base will be provided for holding the general pace of inflation to its 1972 rate of increase or for reducing it further. Any substantial break-through in the pattern of 1972 wage increases, on the other hand, can be expected to shift expectations in a more pronounced inflationary direction almost immediately." Pierson further emphasizes that success in holding the line in wages depends heavily on keeping consumer prices close to the 2.5 percent ceiling level. "Unless price increases are held closely to the 2.5 percent ceiling figure, protest actions of one form or another aimed at the wage-price control program are sure to occur."

Pierson gives a clear picture of the difficulties both of tightening or of loosening the wage-price control program. To broaden the scope of the program (to cover, for example certain foods, interest charges, and profits) would involve extremely difficult issues of administration and enforcement. There are strong doubts that the American business community would support the regulations this would require. On the other hand to narrow the program's scope would create a great deal of difficulty in deciding who would be covered and who exempt from the regulations. "Changing the jurisdictional scope of a program of this sort in either direction could not help but engender a great deal of confusion and maneuvering among those workers and employers who found themselves just inside or outside the new rules."

Marten Estey supplies for this compendium a careful evaluation of relative changes in union and nonunion wages from 1959 through 1972. He finds that in recent years, current or new wage increases in union situations are larger in percentage terms than in nonunion situations, both in manufacturing (since 1967) and the economy as a whole. During the period of wage-price control, union wage increases have continued to be measurably larger, in percentage terms, than nonunion, although, because union wage increases were running very high just prior to the control program, the percentage *reduction* in the size of wage increases has been greater in the case of union wages.

Policy implications from these findings are limited in part by (1) the small segment of nonunion enterprises in manufacturing for which wage change data comparable to that for union enterprises are available, and (2) the lack of comparable data on wages and benefits combined.

However solely on the basis of the evidence he presents, and assuming inflation control to be the primary policy objective, Estey suggests the following policy dilemmas:

1. "It may be argued that controls should be continued on union wages because union wage increases are still above the general pay standards, and because the bargaining schedule for 1973 will tend to boost the net effect of union wage changes." This argument is supportive of the position taken by Pierson as described above.

2. "Conversely, it may be argued that controls on nonunion wages should be eliminated on the grounds that nonunion wage increases are already below the general pay standard, both in manufacturing and, on the basis of Pay Board data, on an economy-wide basis as well."

3. "On the other hand, the fact that nonunion wages are more responsive to economic change, and that nonunion wage increases were larger than union increases from 1959 to 1966, raises the question whether this pattern is about to be repeated as economic expansion continues. If so, this might be the worst time to decontrol nonunion wages."

The two papers by Lily Mary David and Charles Ciccone deal with two particular aspects of employee compensation which deserve more attention in the consideration of the future of wage control than they have received thus far; namely, cost-of-living escalation and fringe benefits; both are likely to play a major role in the 1973 wage negotiations, as Pierson's paper already indicates; both may require more explicit recognition in legislation.

David notes that cost-of-living escalation clauses affect about 5 million workers in the private U.S. economy, 4.3 million under major collective bargaining contracts, those affecting 1,000 or more workers. (Also covered by cost-of-living escalation are two major Federal pension schemes, the Federal civil service retirement system and the Social Security System, together covering about 30 million beneficiaries. These are not further considered in David's paper.)

There is no statistical evidence that formal wage escalation clauses have increased inflation. Rather, to the extent that cost-of-living escalation leads unions to accept more reasonable settlements than they would agree to if they felt they needed to include an inflationary hedge in their wage demands, it could have a counter-inflationary influence.

David's fundamental conclusions are the following:

> If cost-of-living escalation is considered desirable, control policy must permit workers who adopt escalation to receive large enough increases in the event of rising prices to warrant their giving up part of the increase they could receive without escalation. Workers will not gamble on an escalator clause unless it gives them a chance of significantly larger total increase in pay if prices rise than they could be guaranteed regardless of what happens to prices.
>
> Any decision regarding escalation policy presumably should also consider the frequency of permissible adjustments. Theoretically, the less frequent the cost-of-living reviews, the less their inflationary potential. On the other hand, the less frequent the adjustments that are permitted, the less willing unions may be to adopt escalation, or at least the larger the initial guarantee they will expect.

Ciccone points to the steadily increasing proportion of fringe benefits in the total employee compensation package and points to several issues that this raises for the wage-price control program.

First there is some evidence, but by no means conclusive, that the Pay Board standards have motivated a real shift from wages to benefits. Part of the doubt lies in the fact that the Pay Board considers only applications for increases from the larger (Tier I and Tier II) firms and has no data on the impact that these applications have on smaller firms and thus on the economy as a whole. The lack of adequate separate wage and benefit data is proving to be a serious handicap to sound analysis of all the issues connected with wage fringe benefits.

There is some risk in the trend toward "qualified" benefits, i.e. those generating deferred income for employees, such as private pension plans, insurance programs, and savings plans. Because they are normally less inflationary than other wage increases or benefits that provide immediate increases in compensation, they are more readily agreed to by the Pay Board. However, they do still impose an immediate cost

on employers and to the extent that these costs are reflected in market prices, they may be a factor in causing wage stabilization targets to be missed.

Ciccone notes that lower-paid workers, in the smaller nonunionized firms, as a whole lag in fringe benefit coverage. Exempted from wage and fringe benefit controls, their employers may push fringe increases rather than wage hikes, especially if money wage raises are difficult to come by. But, under existing reporting requirements, the extent of this trend is unknown.

If something like the present wage and fringe benefit ceilings are continued, Ciccone foresees alternative developments, depending on the extent of upward movement of consumer prices. If price rises are moderate, the demands for wage increases would be likely to remain within the basic wage standards with relatively little emphasis on a better fringe package. If a large climb in consumer prices should occur, the pressure for larger fringe package increases will be severe. "In summary, should price controls be only slightly less successful than hoped for, a moderate shift to benefits may occur; should controls fail to slow down price increases entirely, a major shift to fringes may result * * * . Expenditures for fringe benefits during a control period extending present standards can rise under a variety of economic conditions with the magnitude of the increases varying with the degree of success or failure registered by the price control program."

Further Ciccone argues that a system to survey wage and benefit movements among all sectors of the economy, whether controlled or not, should be devised which would supply the control agencies with current actual economy-wide data. Measuring the actual rise in wage and benefit levels and analyzing wage-fringe tradeoffs on a current basis are necessary prerequisites for proper and timely adjustments in the overall wage-benefit program.

The concluding paper in this compendium, by Edward Knight of the Library of Congress, provides a chronological survey of the efforts of the Federal Government to control inflation during the post-war era with particular emphasis on the four periods, 1945–48, 1950–51, 1955–58, and 1965–72. The survey points up the varying inflationary forces which occured in this 26-year period, the many conbinations of policy options that were chosen, and the unevenness of results. Knight found that probably the most effective measures to combat inflation within this period were those during the Korean war.

As this survey makes abundantly clear, the measures undertaken to curb inflation were, of course, part of the broader economic policy decisions that had such additional objectives as achieving high levels of employment, a satisfactory rate of economic growth, and a sound position in international trade and finance. To some extent, these differing objectives involved compromises and tradeoffs. Thus it is not surprising that during certain periods some objectives received relatively greater priority or emphasis than others, depending not only on the state of the economy but also on the political, social, and economic judgments within the administration at any given time. While no definite policy guidelines appear in this paper, it does illuminate some of the many alternative options which the administration and the Congress are likely to want to consider in the present state of the economy and the nation.

CONCEPTUAL AND EMPIRICAL PROBLEMS IN THE MEASUREMENT OF PRICES AND PRODUCTIVITY

By ROGER H. BEZDEK*

INTRODUCTION

No problem is more basic to an incomes or wage-price control program than that of measuring prices and productivity. The critical role of price measurement is obvious: the high rate of the rise in prices was one of the major causal factors behind President Nixon's New Economic Policy, the behavior of prices since August 15, 1971, has been closely scrutinized, and the level of the rate of inflation will be the major determinant of how quickly the present wage-price controls will be abolished. It is thus of critical importance to determine how accurately it is possible to measure prices and changes in prices. The central role of productivity in the present economic controls program was recently emphasized by C. Jackson Grayson, chairman of the Price Commission:

> With each passing moment of experience in the Price Commission, I become increasingly convinced that the length of time we're going to have controls is almost directly proportional to the length of time it takes the private sector to get American productivity on the rise again * * * . And I'll go farther. Since one-sixth of all jobs in the United States are public jobs in Federal, state, and local government, the private sector must demand the same standards of the governments they elect. They must see to it that the public sector matches the private sector in productivity improvement.[1]

Thus the meaning and measurement of productivity emerge as significant issues in Phase III of the New Economic Policy.

The purpose of this paper is to examine the major price and productivity indexes which exist for the American economy, pinpoint their strengths and weaknesses and provide an overall assessment of the validity of these measures in relation to the wage-price controls. The first section is devoted to a discussion of price indexes, the second section covers the problem of productivity measurement, and the final section contains conclusions and recommendations pertaining to these issues.

PRICE MEASUREMENTS AND PRICE INDEXES

There presently exists no general comprehensive price index for the U.S. economy capable of measuring prices at intermediate steps of production as well as at the point of final distribution, of providing an indication of the behavior of prices in any section of the economy,

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[1] Grayson [9].

and of measuring price movements for the economy as a whole.[2] Rather, there exists a number of price indexes and indicators, each constructed for a specific purpose, referring to a certain sector or sectors of the economy, and beset by specific conceptual and empirical problems. It is thus not surprising that different indexes will often show prices moving in a different direction during the same time period.

The major price indexes available in the United States are listed in Table 1. Here only those indexes of primary interest in the present wage-price control program are discussed: the Consumer Price Index, the Wholesale Price Index, the Implicit Price Index (or Deflator) and the construction price indexes.

TABLE 1.—MAJOR PRICE INDEXES FOR THE U.S. ECONOMY

Index	Agency responsible for the index	Earliest date for which data are available	Description
Consumer Price Index	Bureau of Labor Statistics, U.S. Department of Labor.	1913	A measure of changes in prices of goods and services bought by urban wage earners and clerical workers.
Wholesale Price Index	do	1890	A measure of price changes for goods sold in primary markets.
Implicit price index	Bureau of Economic Analysis, U.S. Department of Commerce.	1952	A measure of the price levels of all final goods and services produced during a specific time period.
Construction price indexes.	do	(1)	A composite index of construction costs and prices.
Export and import price indexes.	Bureau of Foreign Commerce, U.S. Department of Commerce.	1913	A measure of changes in the average unit value of exports and imports.
Indexes of prices paid and received by farmers.	U.S. Department of Agriculture	1909	Measures of the unit value of agricultural output and of prices of commodities to farmers.
Industry-sector price indexes.	Bureau of Labor Statistics, U.S. Department of Labor.	1962	Composite indexes comprised of price series matching the economic activity of a defined industry or economic sector.
Spot market prices	do	1934	A measure of price movements of 22 sensitive basic commodities whose markets are presumed to be among the first to be influenced by changes in economic conditions.
Railroad freight rate index	Interstate Commerce Commission, U.S. Department of Commerce.	1948	A measure of the structure of rates charged by railrods to haul freight.
Stage of processing indexes.	Bureau of Labor Statistics, U.S. Department of Labor.	1962	Measures of price movements for commodities at various stages of production.

[1] Different years for different categories.

The Consumer Price Index

Probably the best known and most widely accepted indication of price movement in the economy is the Consumer Price Index (CPI), which dates back to 1913 and is compiled by the Bureau of Labor Statistics. The CPI measures changes in the standard of living based on a fixed "market basket" of goods and services, and is a statistical measure of changes in the prices of commodities purchased by urban wage earners and clerical workers, including families and single persons.[3] The BLS obtains an indication of price movement by repricing at fixed time intervals a specified mixture of goods and services and comparing the aggregate cost of this market basket with

[2] See Searle [19] for a detailed discussion of the problems inherent in developing a comprehensive price index for the whole economy.

[3] For a description of the Consumer Price Index see [31] pp. 75-95.

that which existed in a selected base period. The quantities of these commodities are held fixed except for periodic weight revisions, and the present weighting structure for the CPI was determined from the BLS *Survey of Consumer Expenditures, 1960-61*.[4] The price estimates are obtained from a detailed sample of consumer units.

It is important to distinguish a constant utility or cost of living index, which the CPI is not, from a price index, which the CPI is. The Consumer Price Index measures the average price of a specified collection of goods and services purchased by a representative sample of families and individuals and primarily reflects price changes. A true cost of living index, on the other hand, would measure not only changes in the price of a fixed collection of commodities, but would also take into account all other factors which influence an individual's "standard of living," such as substitution of cheaper commodities for more expensive ones, changes in the quality of goods, introduction of new goods and the disappearance of old ones, and so forth.[5] A cost of living index would be a measure of utility and rises in it would indicate that it has become more expensive to maintain a specified level of utility. A price index, such as the CPI, can measure only one component of this: the average prices of a collection of goods and services. Unfortunately, this distinction is often overlooked and changes in the Consumer Price Index are usually equated with changes in the "cost of living." This distinction will become clearer in the discussion below.

Traditionally the most perplexing problem in the construction of index numbers, including the CPI, has been the effects of changes in quality in the products in the index. The CPI is supposed to measure the change in price of a collection of given commodities, but in an economy as dynamic as that of the U.S. the quality of goods and services is constantly changing. Thus increases in the price of goods, if they reflect quality changes, should not be registered as price increases at all.

It is a common belief among economists that the CPI has historically overstated the rise in prices because it has failed to adequately take into account changes in quality. While this feeling in most cases has been based more on intuition than on empirical research, several studies do support this hypothesis. Zvi Griliches studied price changes in automobiles in the 1950s and concluded that the CPI overstated the price increases by a wide margin, and more recently Yoram Barzel reached a similar conclusion with respect to the CPI estimates of the costs of medical services.[6] On the other hand, due to the procedures used by the BLS to compensate for quality differences it is also possible for the CPI to understate the rise in price of commodities and studies have shown this to be the case in a number of instances.[7] A summary of the conclusions reached in different studies with respect to the "quality bias" in the CPI is presented in Table 2.

At this point the evidence appears to be inconclusive and it is impossible to state whether there is any significant bias in the CPI in either direction due to quality changes. The important point to be noted is that the widely held belief of an upward bias in the CPI

[4] See [30].
[5] The differences between a cost of living index and a price index are discussed in [18], pp. 51-52, and in [17], pp. 1-3.
[6] See Barzel [2].
[7] For a summary of the results of these studies see Triplett [25].

TABLE 2.—SUMMARY OF CONCLUSIONS OF SEVERAL STUDIES OF PRICE INDEXES AND QUALITY CHANGE, VARIOUS PERIODS 1947–66

Author	Product or service	Period	Conclusion
Gavett	Washing machines	1963–66	Slight upward bias.
Do	Men's suits	1958–66	Do.
Do	Carpets	1959–66	Upward bias.
Martin	Hospital costs	1954–61	Do.
Scitovsky	do	1951–65	Downward bias.
Bartzel	Medical Services	1945–64	Upward bias.
Lamson	Theater admissions	1947–64	Do.

Note. "Upward bias" means the quality-adjusted price index computed in the study rose less than the relevant CPI component if prices were rising or fell more than the CPI component, if prices were falling. "Downward bias" indicates the opposite finding.

Source: Triplett [25].

due to quality changes has not been conclusively proven and that the bias introduced into the CPI by quality change may in reality be insignificant.

The possibility of a "substitution bias" appears more plausible, for the use of base period weights in the CPI tends to overstate the actual price rise in times of increasing prices. The reason is that consumers will substitute those goods whose prices increase less or decrease more for those whose prices increase more or decrease less, and by failing to take this substitution into account the fixed weight CPI will overestimate the rise in the cost of equivalent market baskets. The fixed weight CPI thus assumes that the consumer maintains the same patterns of expenditures as he exhibited in the base year even though the relative prices of these goods change.

While this has long been recognized as a problem, there exists no easy solution to it. One possible remedy would be for the BLS to revise the fixed weight indexes more than once every ten years. While this may be a step toward solving the problem several points should be noted: (i) no matter how frequently the weights are revised fixed weights will remain for some periods, and even intrayear shifts in consumption patterns are often significant, (ii) as the weights are changed more frequently the original concept of the fixed market basket becomes more nebulous, and (iii) it is difficult to determine if the consumer believes that he maintains an unchanged standard of living as he shifts purchases among different goods. To overcome these problems the use of econometric demand models has been suggested. Given assumptions about the consumer's preference patterns these models could be used to statistically estimate indexes which would take substitution into effect among all items of the consumer's budget. However, while considerable progress has been made in this area in the past decade, the assumptions underlying these models and the implications of their results are still a point of controversy among econometricians. It thus appears unlikely that econometric methods will yield results which can be incorporated into the existing CPI for some time to come.[8]

Another problem endemic to the CPI concerns the introduction of new commodities into the index. The complications new commodities cause are obvious: if new goods which account for a significant portion of consumer expenditures are introduced between revisions of the market basket then the CPI. by not including these

[8] Popkin [17], p. 2.

goods, will be biased. The most commonly recommended solution to this problem is the more rapid introduction of new commodities into the index; however, it is not clear that in all cases this represents the optimal solution. Most new products, especially those for which good substitutes did not previously exist, are often priced at relatively high levels in the early years of their history because of limited supplies and are then gradually reduced in price as large scale production and mass markets develop. Television sets in the late 1940's and color televisions in the early 1960's are examples of this. Thus if new products are introduced too quickly, the subsequent rapid decline in their price will tend to introduce a downward trend into the CPI. Further, the BLS is aware of this problem and in the past decade has reduced the time lag in introducing new products into the CPI which had generated much of this criticism. Thus the significance of this particular problem has probably tended to diminish in recent years.

Another major problem area in the CPI concerns the treatment of consumer durable goods, which are presently measured at their purchase price rather than valued at the flow which their services yield to consumers. This practice has been criticized because "The welfare of consumers depends upon the flow of services from durable goods, not upon the stocks acquired in a given period." [9] Unfortunately the treatment of durables as a flow rather than as a stock in the CPI would require the assumption of perfect foresight, perfect capital markets and knowledge of future prices. Thus while the present handling of durable goods in the CPI presents problems, an acceptable alternative has yet to be devised.

Additional problems for the CPI relate to the handling of taxes, government services, and externalities in consumption. While indirect taxes are included in the CPI, income taxes and other direct taxes are not. If taxes are viewed as payment to the government for the provision of general or specific services, then they should probably be included as some sort of price paid for these services. However, the unique and noncompetitive nature of most public services makes this approach extremely difficult. In this context, it may be useful to have available price series inclusive of various types of direct and indirect taxes.[10] The issue of externalities in consumption has become increasingly important recently due to the concern with environmental quality. For example, should some type of adjustment be made in the CPI for the costs of federally required pollution control devices on new automobiles? While convincing arguments could be made in either direction, a satisfactory solution to this dilemma is presently not available.

The timing and inclusion of new types of retail outlets and methods of distribution also present problems, for the prices of similar goods are usually lower in large volume retail stores and discount houses than in the traditional outlets reflected in the CPI.[11] Further difficulties arise in the handling of changing terms of insurance coverage and the treatment of seasonal items in the CPI. Finally, more technical criticisms have also been leveled at the CPI concerning the lack of documentation of the procedures used to develop the index and the

[9] NBER [18], p. 53.
[10] Searle [19], p. 20.
[11] For a discussion of this problem see [7], pp. 29–31.

indeterminancy of the sampling error inherent in the CPI. The criticism for lack of documentation is presently not as valid as it once was, and the BLS is to be commended for the publication and distribution of the detailed procedures involved in developing the CPI.[12] Similarly, the sampling error in the CPI has also recently been estimated and it has been concluded that any change in the index of 0.2 percent over a specified period is significant at the 5 percent level.[13] With this in mind, and considering the procedural errors inherent in the construction of the CPI, it would probably be wise to reconsider the quoting of changes in the CPI in tenths of percent.

The Wholesale Price Index

The Wholesale Price Index (WPI) is the oldest continous statistical series published by the BLS and contains data beginning in 1890. From its inception the WPI was designed to measure price changes for commodities sold in primary markets and pertains to sales in large quantities rather than to prices received by wholesalers, jobbers, or distributors. When it was first initiated it was calculated on the basis of the unweighted prices of approximately 250 items, but by 1971 the WPI had grown to include over 8,000 price quotations and 2,500 commodities.[14] When it was first developed the WPI was considered to be a general purpose measure of the price behavior of the economy because it avoided many of the problems inherent in measuring retail prices. However, with the subsequent development of the Consumer Price Index, the Implicit GNP Deflators, and other price indexes this role of the WPI was gradually supplanted. While it is still used today to a limited degree to measure overall economic trends, it is more useful in indicating price movements for intermediate products and for specific sectors and industries.

Even more than the Consumer Price Index, the Wholesale Price Index is subject to a number of serious criticisms which cast doubt upon its validity and severely limit its usefulness as a measure of inflation. The problems with the WPI can be grouped into four categories: the lack of a theoretical framework, insufficient sector coverage, deficiencies in the basic data and price quotations used in its construction, and failure to deal adequately with quality changes.

Whereas the previous discussion of the Consumer Price Index began with a discussion of the theory behind it, no such comparable theory exists for the Wholesale Price Index.[15] While the WPI is loosely defined as a measure of price behavior in primary commodity markets and has a number of important uses, no behavioral model derived from economic theory defines the concept of the WPI or the use of its industrial commodities component as a variable. The WPI cannot be said to be a representative cross section of the economy and is a composite of both costs and prices. Its behavior is highly dependent on the universe of transactions it covers. However, the universe of the WPI has never been precisely defined and is determined largely by ease of collection. Thus:

> From the viewpoint of economic analysis the Wholesale Price Index does not appear to be a meaningful economic construct. The transaction coverage is not

[12] This documentation is presented in [35].
[13] A technical description of the methods used to compute the sampling error in the CPI is given in Wilkerson [40].
[14] BLS [31], p. 97.
[15] Popkin [17], p. 5.

descriptive of any definable set of producers or purchasers in the economy. Nor does the present WPI universe have a logical structure of subclasses which are appropriate to the analysis of economic developments: for example, indexes of buying and selling prices of industries, which would allow analysis of changes in "value added." There is no principle to determine how many steps in the fabrication of a raw material should be included.[16]

One remedy which has been repeatedly suggested is to reformulate the weighting scheme of the WPI in terms of an input-output table, which shows the dollar value of transactions among industries, including sales among establishments within an industry. This would require the construction of price indexes for each cell of the table to indicate how price changes in certain industries are related to price movements in others. The WPI developed in this manner would meet the requirement of an index of prices of commodities purchased and sold other than at retail level, and the prices of these commodities would be weighted by their relative importance in total sales.[17]

A second major problem with the WPI is its inadequate sector coverage, which severly limits its usefulness as a commodity price indicator. Despite the tenfold increase in coverage of the WPI since its inception, at the present time it covers less than 20 percent of all industries in the economy.[18] More seriously, the coverage of the WPI is restricted primarily to the manufacturing sector, and it contains no data on construction, government or the service sectors of the economy.

Another problem with the WPI concerns the basic data and price quotations used in its construction. While it is a common misconception that the BLS uses list prices rather than transaction prices in computing the WPI, this is not true. The BLS recognizes the problem and goes to great lengths to obtain the prices actually paid. However, the Bureau is often less than successful in this and many of the price quotations utilized in the WPI do not accurately reflect transaction prices.

Finally, quality changes and the introduction of new goods cause the same types of problems for the measurement of wholesale prices as they do for the measurement of retail prices. Since these difficulties have been discussed in the previous section dealing with the Consumer Price Index they need not be reiterated here. It should be noted, though, that for some goods at least, it appears as though the BLS has been getting better cooperation from manufacturers in recent years and for many items the "quality bias" in the WPI may now be negligible.[19]

The Implicit Price Index

The Implicit Price Index (IPI), also called the Implicit Price Deflators for gross national product, is compiled by the Bureau of Economic Analysis (BEA) of the Department of Commerce as a part of its work on the estimation of U.S. National Income and Product Accounts.[20] The IPI series was begun in 1952 and seeks to measure price change in the major components of gross national product. Indexes are published for the major components of GNP and are also available for

[16] NBER [18], p. 64.
[17] Searle [19], p. 12.
[18] At the four digit SIC level BLS WPI data presently cover approximately 18.4 percent of all industries; see Popkin [17], p. 6.
[19] This is especially true with respect to automobiles; see [7], p. 27.
[20] The U.S. National Income Accounts are published every year in the July issue of the *Survey of Current Business*; for example see [37].

various detailed categories of GNP. The IPI breakdown of GNP is given in Table 3. This index is especially important because it is the only official index which attempts to measure the overall price behavior of all commodities in the economy.[21]

TABLE 3.—GROSS NATIONAL PRODUCT IN IMPLICIT PRICE INDEX CONSTANT DOLLARS

[Billions of 1958 dollars]

	1968	1969	1970	1971
Gross national product	706.6	725.6	722.1	741.7
Personal consumption expenditures	452.7	469.1	477.0	495.4
Durable goods	81.3	85.6	83.1	92.1
Nondurable goods	197.1	201.3	207.0	211.1
Services	174.4	182.2	186.8	192.2
Gross private domestic investment	105.2	110.5	104.0	108.6
Fixed investment	98.8	103.8	99.9	105.9
Nonresidential	75.6	80.1	77.6	76.8
Structures	23.4	24.3	23.6	22.8
Producer's durable equipment	52.2	55.8	54.0	54.0
Residential structures	23.2	23.7	22.3	29.1
Nonfarm	22.8	23.2	22.0	28.7
Farm	.4	.5	.4	.4
Net exports of goods and services	1.0	.2	2.2	.1
Exports	45.7	48.4	52.2	52.6
Imports	44.7	48.3	50.0	52.5
Government purchases of goods and services	147.7	145.9	139.0	137.6
Federal	78.1	73.5	64.7	60.8
State and local	69.6	72.4	74.3	76.8

Source: Survey of Current Business [37].

The IPI represents the ratio between current dollar GNP and constant dollar GNP and is not an independently developed price deflator series. Rather, a number of individual price indexes are combined to obtain an appropriate deflator for a component of GNP and the resulting price adjusted figures are aggregated into designated subtotals to obtain constant dollar GNP. These deflated data are then divided into the corresponding figures stated in term of current dollars and an average price relationship emerges or is "implicit." [22] The data used to construct the IPI are not derived independently by the Commerce Department but are instead drawn from existing data assembled by a number of other federal agencies and private organizations. In constructing the IPI heavy reliance is placed upon the Consumer Price Index, the Wholesale Price Index, the index of prices paid or received by farmers, and on a variety of other price series.

Aside from the obvious problems caused by the inconsistency of aggregating price series data compiled by different agencies and organizations there are two major criticisms of the IPI: it is a Paasche type index which utilizes shifting weights, and it does not adequately account for price and output changes in the construction industry and the government sector.

The IPI is a Paasche index; that is, the price weights change as the composition of output changes or, more accurately, the weights for each year or quarter are used to average the relative change between that year or quarter and the base period. Thus comparison of the IPI deflator for years other than the base year reflects the shifting composition of output as well as price changes. The use of the current year weights, as opposed to base year weights, tends to indicate a smaller

[21] Gainsbrugh and Backman [7], p. 43.
[22] Ibid.

rise in the IPI over time because for commodities whose prices advance the most over the period, the physical quantities purchased tend to decline more or advance less from the base year as compared with those items experiencing price declines. Thus price increases are underemphasized and price declines are overstated.

A second and more serious failing of the IPI relates to the manner in which two critical sectors of the economy are handled: the construction sector and the government sector. These sectors are deflated by combining costs of materials and labor into an imputed price series without any adjustment for changes in output per man-hour. Thus the degree of price rise is overstated when output per man-hour is rising. With respect to the construction industry, it is difficult to obtain an appropriate index of prices to use as deflators: the units constructed are largely heterogenous and the quality changes incorporated are difficult to quantify.[23] Thus the cost components are weighted on the basis of their relative importance in the cost of a unit of a specified type of construction during the base period and no allowance is made for changes in output per man-hour. Thus the IPI construction deflator is "* * * defective in almost every possible way."[24]

The IPI for the government component of GNP is deficient due to the unique nature of government services and to the use of employee compensation to estimate prices for public sector output. The commodities purchased by government are deflated by existing price indexes, but these indexes are not appropriate because they do not usually apply strictly to the categories of goods and services purchased. More seriously, in computing the government price index no allowance is made for increases in productivity by public employees because the necessary data are not available. All that is measured in the government component of the IPI is the relative increase in employee compensation, and no attempt is made to compensate for the increasing productivity, skills, or civil service grade level of government employees. The IPI including government and construction overstates the rise in prices and the IPI excluding these sectors may be a more satisfactory measure relative to price change in the economy.

Since the Implicit Price Index is the only official measure of price change for the economy as a whole, these defects are especially serious and need to be remedied. The Council of Economic Advisers has recognized this problem for some time and the resources allocated to the development of the National Income Accounts have recently been greatly increased. It is thus reasonable to hope that this situation will be improved in the near future.

Construction Price Indexes

The construction industry has been singled out here both because it is a critical sector which in recent years has registered above average rises in prices and also because it is an industry for which it is especially difficult to develop adequate price indexes: "Although construction activity is one of the more volatile sectors of the economy, no satisfactory indexes are available for evaluating the extent and sources of inflation in construction." [25] It is difficult to develop price indexes for construction activity because the units built are heterogenous and

[23] These problems are discussed in more detail in the following section on construction indexes.
[24] NBER [18], p. 87.
[25] Swerdloff [23], p. 36.

constantly changing and because it is very hard to measure quality change in construction. This latter problem arises because it is difficult to quantify changes in convenience, style, efficiency, attractiveness, and building materials.

Another problem exists in regard to the distinction between construction "prices" and construction "costs." "Price" refers to the price paid for the completed unit by the ultimate buyer, while "costs" refer to the total costs paid by the contractor. The difference between the two will be equal to the contractor's profits—but not subcontractor profits, real estate commissions, land values, and related expenses.[26] Arguments have been advanced in favor of using either a "cost" concept or a "price" concept in the derivation of the construction index. The problem is that the construction indexes which do exist are not based upon either a pure cost or price concept but, rather, are a composite which utilizes both concepts to some degree. That is, while some components of the indexes are based on a price concept, data limitations force the use of wage rate and building materials price statistics in the estimation of other components. This latter convention implies the assumption that there is no change in productivity in the construction industry and tends to introduce an upward bias into the construction index. One study estimates that between 1947 and 1963 the standard construction price index overstated the rise in prices in this sector by more than one hundred percent.[27]

There are other serious problems with the construction indexes which are of a more technical nature: most of these indexes are computed from secondary data collected by private firms, the weights used are of uneven quality, the wage and price statistics used are often not compiled from actual transaction data, the geographic coverage of the indexes is spotty, and the definitions of construction employed often differ with respect to the handling of various types of equipment, landscaping, and other items.[28] These factors tend to introduce biases into the construction indexes which make them extremely unreliable. In the past decade many basic reforms in the construction data and the price indexes for this sector have been recommended. While a comprehensive discussion of these is outside the scope of this report, it can probably be safely concluded that the development of reliable price indexes for construction still lies somewhere in the future.

Productivity and Productivity Measurement

Conceptual and Definitional Problems

Productivity in the broadest sense refers to the efficiency with which inputs are utilized to produce a specified output and can be defined as the ratio relating output to the resources consumed in producing that output. More precisely, "* * * productivity is an expression of the physical or real volume of goods and services related to the physical or real quantities of inputs."[29] Thus productivity can refer to the efficiency with which any input to the production process—labor, capital, raw materials, energy, and so forth—is utilized. Nevertheless, productivity

[26] See NBER [18], p. 87.
[27] See Dacy [5].
[28] For a more detailed discussion of these problems see Swerdloff [23] and NBER [18], pp. 87–89.
[29] BLS [32], p. 7.

is most frequently used to pertain to output per unit of labor input: labor is the most important productive resource, it is a basic input in the production of all commodities, it can be quantified relatively easily, and the relationship between labor costs and labor productivity is critical in determining inflationary trends in the economy. Even focussing primarily on labor productivity, however, there are a number of conceptual difficulties which arise relating to the definition of output, the definition of labor input, weighted and unweighted productivity measures, and the concept of total factor contribution.

The concept of output generally used is that of final output, or real product, which requires the exclusion of intermediate products to avoid double counting. But even accepting this definition technical problems still arise with the handling of capital goods, government services, and national security expenditures.[30] Productivity measurement must deal not with economic activity or production, per se, but with the final products of this activity which are desired for their own sake by society.

On a more microeconomic level, problems of defining output often arise because of the heterogenous nature of most industries. If an enterprise or producing unit is engaged in the manufacture of a single homogenous product production simply refers to a count of the units of the commodity produced, either in physical or value terms. However, most plants and industries are engaged in producing simultaneously a variety of heterogenous products and these have to be combined in some manner to obtain an appropriate measure of total output. Since combination on the basis of physical quantity is not usually possible, the standard procedure is to combine the goods on the basis of their dollar values, using their prices as weights.[31] This type of index is referred to as constant dollar output or deflated value of output and it adjusts the total value of production for changes in prices by use of a price index. This measure is thus subject to all the limitations of price indexes discussed previously. Further, when different commodities are combined on the basis of price weights, total output will be affected not only by changes in labor productivity but also by changes in the prices and the mix of the commodities.

Labor input can also be defined in several ways: it can refer to the total number of persons employed, to only those employees engaged in production, to the number of man-hour involved, or to "full time equivalent" employees. On an aggregate level the measure of total labor input will be affected by the handling of multiple job holders, part time workers, self-employed workers, seasonal workers, unpaid family workers, and workers who are paid in kind. Even on the individual plant or factory level it is not always clear what is meant by total labor input. Should only those workers directly engaged in production be counted or should the labor input measure also include supervisory personnel, corporate officials, and security personnel? Similarly, if output per man-hour is the variable of interest, as it often is, the dicotomy between hours worked and hours paid causes problems. An hours worked concept is usually preferable because it excludes hours paid for but used for illness, vacation, holidays, and so forth. But even hours worked will include start up time, coffee breaks and standby time and does not directly measure actual time spent in production.

[30] See Kendrick [11], pp. 20-30.
[31] BLS [32], p. 8.

Another problem that arises with the hours worked concept is whether to treat all hours as homogenous or to differentiate on the basis of the quality of labor. While it appears sensible to make some allowance for the quality of the labor input involved, attempts to take into account differences due to differing wage rates, experience, skill, education, regional wage differentials, and other variables have not been successful. A number of studies have shown that the manner in which labor input is standardized on the basis of these quality variables will have a significant effect on the measure of labor productivity, but a uniform procedure for doing this has yet to be agreed upon.

Productivity can also be measured in terms of the output per unit of a single factor of production or as a weighted aggregate of all the inputs to the production process. Under the former definition productivity relates output to a single input without attempting to measure the specific contribution of that input to production. The latter definition relates output to a combination of inputs and reflects the aggregate contribution of all the factors utilized in production. This latter measure has been termed a multifactor productivity measure: it yields a productivity index for all factors combined and eliminates distortion caused by substitution of different factors for one another.[32 33] These multifactor measures have generally been limited to measuring the combined influence of labor and capital.

Empirical U.S. Productivity Measures

While some data on productivity are collected by the Department of Commerce, most of the statistics relating to labor productivity are collected and compiled by the Bureau of Labor Statistics of the Department of Labor. The BLS has compiled statistics on output per man-hour, compensation per man-hour, unit labor costs, and related costs for the economy as a whole and for broad sectors of the economy annually since 1909. Studies of productivity within individual industries have been conducted by the BLS since 1898.

The BLS sector indexes refer to the ratio between dollar gross national product originating in the individual sectors and the corresponding hours of all persons employed. Two estimates of man-hours are utilized. One estimate is derived from payroll data and includes paid time for vacation, holidays, and sick leave as well as hours worked. Another man-hours series is based on labor force data from the Current Population Survey and pertains only to actual hours worked. Two other measures of labor input are also collected by the BLS on a regular basis: measures of compensation per man-hour, measuring the hourly costs of wages, salaries and fringe benefits, and unit labor costs, which measure the cost of the labor input required to produce one unit of output and are derived by dividing compensation per man-hour by output per man-hour.

As a measure of real output the BLS uses the estimates of constant-dollar GNP developed by the Bureau of Economic Analysis of the Commerce Department, for the use of GNP in current dollars would reflect price change as well as changes in the volume of output.[34] The BLS also uses the data on compensation per employee developed by the BEA as part of the national income accounts. Since this compen-

[32 33] For a detailed discussion of the BLS sector indexes see [31], pp. 213-217.
[34] Ibid., p. 214.

sation measure includes only wage and salary workers and excludes self-employed and unpaid family workers, the BLS must impute a payment for the labor services for these types of employees in the sectors for which they represent a significant portion of the work force. The major source of employment and man-hour data is the BLS Current Employment Statistics program, which furnishes data on employment and average weekly hours of production for workers in nonagricultural establishments. The Current Employment Statistics data have two major deficiencies: they represent a job count rather than an employee count—so that multiple job holders are counted more than once—and they refer to hours paid rather than hours worked. A variety of other sources are used to develop man-hours and employment estimates for the agricultural sector.

The BLS industry productivity studies program measures output per man-hour and output per employee for a variety of manufacturing and nonmanufacturing industries.[35] The indexes date from 1947 and for many industries have been compiled continuously since 1939. The industry indexes of output per man-hour measure changes in the relationship between the physical volume of output in an industry and the man-hours required to produce that output, and are expressed in terms of man-hour requirements per unit of output. Indexes are developed separately for all employee man-hours, production man-hours, and nonproduction man-hours.

The industry output indexes are based primarily on the physical output of the products of the industry aggregated on the basis of fixed period weights, although the quality of the data varies considerably among industries. All indexes are adjusted to benchmark indexes derived from data collected from a comprehensive census. Computation of the index requires the use of unit man-hour weights; however, the required unit man-hour data are not available for all industries and often have to be estimated from unit value weights. Thus for some industries a change in the index can occur without any change in the output per man-hour for any product of the industry.[36] The extent to which the use of these unit value weight estimates introduce distortions and errors into the index is not known.

The index of man-hours is derived by dividing the total man-hours for each year by the base period aggregate. All man-hours are treated as homogenous and additive and no attempt is made by the BLS to differentiate hours on the basis of groups of employees, skills, education, salary levels, or any other "quality" variable. Man-hour indexes are developed for all employees, for production workers, and for nonproduction workers. The employment and man-hours indexes are derived from basic data collected by the BLS and by the Bureau of the Census, and these two sources differ in their definition of man-hours. The Census data include all hours at the plant (worked or payed for) and exclude all paid time when the worker is not present at the plant. Additional differences in the data from the two sources also arise due to sampling and reporting differences. Since neither source provides data on nonproduction man-hours, these have to be estimated from other sources.

Discrepancies in the comparability of output and man-hours data arise from two major sources.[37] First of all, man-hours data are based

[35] For a detailed discussion of the BLS industry indexes see [31], pp. 218–226.
[36] Ibid., p. 221.
[37] Ibid., p. 224.

on total man-hours of establishments in an industry whether the man-hours are applied to the production of primary or secondary products, while physical output data usually include only primary products of an industry. This problem is not serious unless there is significant variation from year to year in the proportion of primary products to total products of an industry. Secondly, changes in the degree of vertical integration also cause problems. Man-hours relate to all operations performed by establishments within an industry, while output is usually measured in terms of the final product. In preparing industry indexes the BLS examines data on the ratio of cost of materials to value of shipments for any indication of a change in the degree of vertical integration.

The industry indexes are subject to a number of qualifications: (i) existing statistical techniques do not always account sufficiently for changes in the quality of the goods and services produced, (ii) consistency is not always maintained between the output and labor input estimates, (iii) changes in the degree of plant integration and specialization are not always reflected adequately, (iv) the estimates involving nonproduction worker man-hours are subject to relatively large margins of error, and (v) annual changes in output are often irregular and may thus be misleading indicators of basic changes in long term productivity trends.[38] Due to these and other statistical problems, the industry indexes should not be considered exact measures; rather, they should be interpreted as general indicators of movement of output per man-hour.

Productivity Measurement Problems

In general, problems relating to the accurate measurement of productivity arise from two basic causes. First of all, due to the difficulties in obtaining quantitative measures of output and input for many industries, various means must be used to estimate these variables. Secondly, most data are collected primarily for purposes other than productivity measurement and very often the form in which these data are available will not be appropriate for accurate productivity measurement.[39]

The national income and product accounts provide most of the data used to estimate productivity, and this source contains measures of real product and labor input which are inadequate for some sectors and nonconformable for many others. These limitations are more severe for some sectors than for others, and there are three sectors of the economy for which productivity measures are especially weak: government, construction, and services.

The measurement of productivity within the public sector has long been recognized as an especially difficult problem. Market valuations are not available for the services of most government agencies, much of the public sector output is of a nature which makes it difficult to quantify (foreign relations, national defense, criminal justice, and so forth), the precise inputs used by the public sector are difficult to measure, and information on the changes in the resources used by government between labor and other factors of production is often not available. The present practice is to use the wage and salary payments to government employees as a proxy for government

[38] Ibid., p. 225.
[39] BLS [32], pp. 9-10.

output. Deflated figures for compensation of government employees are derived by extrapolating base year payrolls on the basis of the change in the number of full-time equivalent employees.[40] This type of output measure, derived from changes in employment, when related to a labor input measure results in no statistical change in productivity. Thus the present treatment, which uses inputs as a proxy for output, denies the possibility of any changes in the productivity of government workers.[41] Not only does this treatment make the investigation of many critical problems impossible, but to the degree that government productivity is increasing this practice results in a serious downward bias in the estimate of national productivity increase. Given the increasing importance of the public sector in the American economy, this problem is likely to become more significant in the future.

While many economists still adhere to the idea that productivity and output in the public sector are impossible to measure, this hypothesis is questionable. It has been argued that except for certain government functions dealing with law, justice, and national policy the output of the government is measurable in principle in terms of physical units comparable in concepts to the physical units which serve as a basis for measuring private output.[42]

Significantly, a very large portion of the resources used by government are used by agencies oriented to production of specific services and achievement of definite objectives. It may thus not be impossible to accurately measure output and productivity in most of the public sector.

It is interesting to note that a number of studies have already been conducted which have developed productivity measures for different areas of government service. The Postal Service and many other government enterprises have traditionally kept records of output and productivity that compare well in quality with those kept by the private sector. Studies of productivity within the Post Office indicate that output per man-hour rose only about 0.3 percent a year from 1965 to 1970 but increased 2.8 percent in 1971—after the Post Office was made a public corporation.[43] More generally, following an initial study done by the General Accounting Office at the request of the Joint Economic Committee, a task force funded by the Productivity Commission is presently developing a productivity index capable of measuring the productivity of about one half of the federal government's civilian work force. One of the tentative conclusions reached by this task force indicates that the increase in productivity in the public sector in recent years compares favorably with that in the private sector. Thus, while the measurement of output, labor input, and productivity in the public sector is difficult, strong evidence exists which indicates that the assumption that productivity within the public sector is constant is not warranted. This makes it imperative that new methods be devised to measure government productivity and that national productivity estimates be revised to take account of changing productivity within the public sector.

[40] See Gainsbrugh and Backman [7], pp. 47-49.
[41] See Lewis' comments on page 125 of [27].
[42] Terleckyj argues this point rather convincingly in [24].
[43] These comparisons are possible because the Post Office has traditionally compiled detailed statistics on the output and productivity of its operations.

Data on output obtained from the national accounts are also deficient with respect to construction activity. Due to the difficulties in determining a satisfactory price index and the nonstandardized nature of most construction, adequate indexes of output and productivity for the construction industry are not available on a continuing basis. The method of deflation used to express construction output in constant dollars makes little allowance for changes in productivity, and the price index used is really a cost index.[44] The indexes of the change in costs of materials and labor used are weighted on the basis of their relative importance in the cost of a unit of a specified type of construction during the base period. The result is that the price index used overstates the rise in construction costs and understates the gains in output and productivity. Thus while the productivity index based on real output for construction indicates that productivity has been constant or even declining in this sector in recent years, independent BLS studies have shown that productivity for some types of construction projects has been increasing as much as three percent per year.[45] To obtain a clearer idea of productivity trends in the construction industry it is necessary to develop more reliable price indexes for major types of construction activities and construction materials and to improve the data on the value of new construction and the characteristics of new nonresidential construction projects.[46]

Measuring output and productivity in the service sector is often difficult because of the absence of a directly quantifiable entity which describes a unit of service. As a result, various types of proxy measures have to be developed. These usually involve the use of a price index for deflating the value of service output and the use of an employment index to measure productivity trends.[47] As was true for the public sector, the use of employment as a proxy implies that there is no change in productivity and, as in the case of government, this assumption does not appear to be justified. Most of the price index proxies used are components of the Consumer Price Index and have different degrees of reliability. It has been argued, for example, that the medical and health care components of the CPI seriously overstate the rise in prices and understate the rise in productivity within that sector.[48] A measure of productivity for health services based on the CPI is thus probably biased. Given both the relative and absolute increase in importance of the service sector in the American economy, new methods must also be devised to measure output and productivity in this sector.

The effects of measurement problems on productivity estimates for detailed industries are much greater than at the national or industry sector level, where there is often a tendency for errors and biases to offset one another. There are three major problems which arise in developing productivity indexes for individual industries: for many industries the detailed product data are not reliable, the quality changes in individual products can often be substantial, and the appropriate weights necessary for deriving the desired industry measure frequently cannot be estimated reliably. Despite these qualifications, last spring the Price Commission released detailed data on productivity growth rates in 433 industries which are to be

[44] See NBER [18], pp. 87–93 and Gainsbrugh and Backman [7], pp. 47–49.
[45] These findings are discussed in [32], p. 10.
[46] These were some of the principle recommendations of the Subcommittee on Construction Statistics, for a summary of these recommendations see Swerdloff [23].
[47] BLS [32], p. 10.
[48] See Barzel [2].

used to compute the allowable price increases under Phase III regulations. The BLS has refused to publish these data because they were simply too unreliable. Given the difficulties inherent in developing productivity measures for detailed industries this is probably the wisest course. While they represent the best data available, their publication and use in the wage-price control program by the Price Commission is questionable.

Finally, there are severe data gaps in the labor input measures presently available.[49] First of all, the selected adjustment of the composition of the labor force on the basis of wage differentials suffers from several deficiencies: pay differentials may reflect variables not related to productivity, industry hourly earnings differentials do not take into account occupational changes occuring within an industry, and reliable methods have not yet been developed to adjust the labor input for differences in education, skill, and experience. Secondly, payroll data on employment and average weekly hours—the primary source of labor input estimates—do not include the entire economy, omit certain categories of workers, and are affected by sampling procedures. Third, because of a lack of data, labor input and productivity measures refer mainly to hours paid rather than to hours worked. The effects of these data problems differ among industries and sectors, and it is impossible to estimate their net effects.

Conclusions and Recommendations

Price Measurement

The Consumer Price Index, aside from being the most widely known indicator of price movement in the American economy, is probably also the most accurate price index available. When interpreted correctly—as a price index rather than a cost of living index—the CPI can yield important and timely information concerning changes in prices and long term price trends. Many criticisms have been directed at the CPI by a wide variety of organizations and individuals. Upon closer investigation many of these criticisms appear to be invalid while for others, which are theoretically valid, there presently does not appear to be an acceptable solution. The quality of the CPI has improved gradually but persistently in recent decades and the Bureau of Labor Statistics is to be commended for its continuing efforts toward making the CPI more reliable.

This is not to say that no problems remain with the CPI, for it still suffers from serious defects pertaining to changes in the quality of the commodities in the index, substitution effects as relative prices change, the handling of consumer durable goods, the treatment of taxes and externalities, and sampling and procedural errors. Three useful improvements in the CPI would be the computation of price series which both include and exclude various types of taxes, the development of a more acceptable and standardized procedure for handling externalities in consumption, and better estimation of the accuracy of the CPI index numbers. With regard to this last point, it might be wise to reconsider the practice of quoting CPI price changes in tenths of a percent. Nevertheless, these defects are not overly serious and the CPI is deserving of a high degree of confidence by the government and consumers.

[49] BLS [32], pp. 11-12.

The Wholesale Price Index, on the other hand, suffers from a number of serious flaws which impair its validity and usefulness: it lacks a theoretical framework, it does not contain sufficient sector coverage, and it contains deficiencies in the basic data and price quotations used in its construction. It is especially urgent that an attempt be made to incorporate data into the WPI from construction, transportation, government and the other sectors presently excluded from it. Consideration should also be given to the possibility of reformulating the weighting scheme of the WPI in terms of an input-output table. Thus, except for certain industries, the WPI is not as accurate or reliable a measure of price change as is the CPI.

The Implicit Price Index is useful and important because it is the only official index which attempts to measure the overall price behavior of all commodities in the economy, but because it is a composite index its accuracy will be affected by the separate indexes relied upon to construct it. The IPI is especially deficient in its handling of the government sector, where it uses employee compensation to estimate prices. Given the increasing attention presently being devoted to the development of the IPI, however, improvements in it should be rapidly forthcoming.

Finally, the construction indexes presently available are of exceptionally poor quality: insufficient attention is paid to the heterogenous nature of construction units, both price and cost data are used in their computation, and many other technical problems exist. The critical nature of the construction industry makes it imperative that more reliable construction price indexes be developed, and the existing construction indexes need to be completely overhauled.

Productivity Measurement

There are a number of complex conceptual and empirical problems related to the measurement of productivity, and the way in which these are resolved will have a significant effect on the productivity measures derived. Both the measurement of output and labor input can often be imprecise. The empirical U.S. productivity measures available suffer from a number of technical problems. These problems arise from the distinction between hours worked and hours paid, the heterogenous nature of the output of most industries, the different handling of multiple job holders, changes in the degree of plant specialization and integration, and many other factors.

Despite these difficulties reliable measures of productivity are available for the manufacturing sector of the economy, for broad manufacturing sectors and for aggregate manufacturing industries. On a more detailed SIC level, however, the productivity measures become less reliable because the errors and biases in different directions no longer offset one another. It thus becomes questionable whether it is appropriate for the Price Commission to use detailed productivity estimates for 433 industries in the development of price controls. On the other hand, assuming that productivity should play some role in the wage-price control program, it becomes difficult to suggest an alternate course of action. One approach might be to study the productivity and cost data available for individual firms. However, this procedure may require the use of some normally confidential information and, more seriously, would run the risk of penalizing the more efficient terms. Furthermore, the Price Commission's initial experience with this approach indicated such individual firm data can also be

highly inaccurate. The use of productivity guidelines formulated in terms of more aggregate industry groups would have the advantage of utilizing more accurate productivity estimates but is likely to attribute the same productivity gains to both relatively efficient and inefficient individual industries. A third approach might be similar to that suggested by John Dunlop, which entails the detailed study of productivity in specific critical or problem industries in the economy.

Productivity measures outside the manufacturing sector are, with a few exceptions, of poor quality. Thus for government, construction and services accurate and reliable productivity estimates are not presently available. Productivity in these sectors is difficult to measure for both theoretical and empirical reasons and many of the problems involved here may prove very hard to solve. Nevertheless, given the changing relative importance of these sectors in the U.S. with respect to manufacturing, productivity growth for the nation as a whole will increasingly be determined by input and output relationships in them. The development of better methods of conceptualizing and measuring productivity outside of manufacturing should thus be given a high priority.

The Validity of Existing Price and Productivity Measures in Relation to the Wage-Price Control Program

In conclusion, it is probably safe to say that at the present time we do have the capability of measuring prices and productivity accurately enough to make feasible the type of general wage-price control program now in effect. With respect to prices, the Consumer Price Index, though far from perfect, is the most accurate and reliable indicator of the overall behavior of prices in the economy. Long term persistent trends in the CPI can be significant, although monthly or quarterly movements in this index must be interpreted with caution. Thus care must be exercised so that small movements or changes in the CPI over a relatively short period of time are not taken to indicate significant trends in prices. The Wholesale Price Index and the Implicit Price Index, while not as reliable as the CPI, can provide useful information for policy making. The WPI can serve as a reliable measure of the behavior of wholesale prices in a wide range of manufacturing industries, while the IPI can he useful in indicating price changes in the components of the national income accounts. The price indexes available for the construction industry are extremely unreliable and, as presently constituted, can provide little useful information for a wage-price control program.

The productivity measures available for the U.S., while leaving considerable room for improvement, are nonetheless reliable enough to base policy decisions on. Productivity is most accurately measured in the manufacturing and the agricultural sectors, which are the sectors of the economy where the largest gains in productivity have traditionally occured. When one considers detailed manufacturing industries or industries in other sectors of the economy, however, the productivity measures become of more uneven quality. The projected relative decline in importance of the agricultural and manufacturing sectors in the American economy in the coming decade makes it imperative that better conceptual and empirical productivity measures be developed for construction, government, and the service industries. If this is not done then the overall estimates of productivity for the economy will grow increasingly inaccurate with time.

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MARKET POWER: ALTERNATIVE TREATMENTS

By WILLIAM G. SHEPHERD*

Market power has a dual relation to price controls. It causes some of the inflation-recession problem which, in *extremis*, price controls have been set up to assuage. And it defines the markets where the controls are to be focused. I will describe, with extreme brevity, the scope of market power and its role in "stagflation," with attention to the most important cases. Then I will appraise the policy solutions, even more briefly.

The message: current price controls and antitrust policies are peripheral to the core problem. The available policy tools are not being used. Even if they were they would probably be insufficient. A new variety of treatments is needed, to fill the present policy vacuum.

1. THE SCOPE OF THE PROBLEM

It is now apparent that the U.S. economy contains a core of industries with a high degree of market power.[1] The central problem is the firm with a high market share in a large market.[2] IBM and Xerox, with market shares of about 70%, are obvious examples. There is now a broad expert consensus, with a good scientific basis, that shares over 30 percent usually involve appreciable market power and affect performance. The same is true, but more loosely, when several firms (the conventional number is 4) have a combined share (or "concentration ratio") above about 50 percent. Market power ranges from pure monopoly (90–100 percent), to near-monopoly (70–90 percent), tight oligopoly (4 firm concentration above 50 percent), and on down to loose oligopoly and perfect competition.

Monopolies are anciently known as an economic and social bad; tight oligopolies are now also recognized as usually behaving like shared monopolies.[3] The behavior is simple; hold price above competitive levels, which would otherwise be at the level of costs. The resulting profit on investment will exceed the competitive profit rate (nowadays about 8 percent), in some cases going as high as 30, 40, even 100 percent or higher. These profit flows convert into wealth for the few lucky owners, and there are other bad effects to be noted shortly below.

Monopolies and shared-monopolies are often short-lived and trivial. It is the others, the relatively few chronic cases in large industries, which are the real concern. The instinct to focus on the "big industries"

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[1] See my *Market Power and Economic Welfare, An Introduction*, Random House, 1970; J. K. Galbraith, *The New Industrial State*, Houghton Mifflin, 1967; John M. Blair, *Economic Concentration*, Harcourt, Brace & Jovanovich, 1972.

[2] W. G. Shepherd, "The Elements of Market Structure," *Review of Economics and Statistics*, February 1972, pp. 25–37.

[3] See Carl Kaysen and Donald F. Turner, *Antitrust Policy: A Legal and Economic Analysis*, Harvard University Press, 1959.

is a sound one, for a high market share in a very large industry obviously does have more total effect than the same share in a small market.

In perspective, these chronic cases form the core of what is a serious but not critical problem. How much market power is there? Answer: a lot. In manufacturing industry, about 50 percent of activity is in markets concentrated above 60 percent.[4] There are more cases of near-monopoly than we usually admit; Xerox, IBM, Western Electric (in AT&T), Campbell Soup, many drugs, General Motors buses and locomotives, for example.

Is market power rising? Not sharply, but the trend is clearly not down.[5] Does it persist? Yes, in many important cases. Autos, telephone equipment, computers, soaps, electrical equipment, and others are part of an industrial scene which—despite rhetoric about dynamic change—has hardened in the last 25 years. The same is true of the utility sectors—power, communications and transport—where regulation has created monopolies. It holds also for the crucial financial sector, where banks, insurance firms, stock exchanges and underwriters maintain fraternal traditions long since vanished elsewhere. Finally, most professions—law, medicine, even morticians—also maintain market power under "self-regulation."

In short, the patient is not getting worse fast, but his sickness is serious and accurately diagnosed. A selection of the main cases is given listed in rough order of importance in Table 1. The disease is also probably more—*not* less—serious in the U.S. than in other industrial economies. Abroad, international trade plays a larger role, and governments have developed a richer variety of treatments for monopoly. In

TABLE 1.—PRIMARY KNOWN CASES OF MARKET POWER IN MANUFACTURING

Company and industry	Probable market share in relevant markets (approximate percent)	Size assets 1971 (million)	Profit rate 1960–71 (percent of invested capital)	Basic position has been held since approximately	Special entry barriers
Western Electric (communications equipment).	98	$4,012	10	Before 1913	Near-exclusive. A.T. & T. supplier.
IBM (computers)	70	9,576	17	Before 1930	
General Motors (automobiles)	55	18,242	19	1928	
Xerox (copying equipment)	75	2,156	23	1963	Basic patent.
Eastman Kodak (photographic supplies).	55	3,298	20	1895	
General Electric (electrical equipment).	45	6,888	16	1900	User loyalties.
DuPont (industrial chemicals	40	3,999	17	1930's	
United States Steel (steel and products).	35	6,409	6	1930's	
Standard Oil (N.J.) (oil products)	25	20,315	13	1930's	
Procter & Gamble (soaps)	35	2,013	16	1920's	Advertising.
Campbell Soup (soups)	75	677	13	1920's	
Coca-Cola (beverage syrup)	50	1,108	20	1920's	Brand name.
Aluminum Co. of America (aluminum).	30	2,665	7	1955	
Gillette (razors, etc.)	65	555	31	1920's	
Kellogg (cereals)	45	378	21	1920's	Advertising.

Note: Certain drug, copper, and glass companies would also be included if sufficient data were avaialble.

Sources: Shepherd, "Market Power and Economic Welfare," op. cit.; "The Elements of Market Structure," op. cit.; and various other sources.

[4] Shepherd, *Market Power and Economic Welfare, op. cit.*, Ch. 7.

[5] See Shepherd, *op. cit.*, Ch. 5 and F. M. Scherer, *Industrial Market Structure and Economic Performance*, Rand McNally, 1970.

Britain, for example, nearly all major cases of market power are more recent and unstable than their U.S. counterparts.[6]

This market power has several main effects, which have been measured with reasonable accuracy. First, it raises prices—once, not repeatedly. This in turn makes excess profits available; roughly, each added 10 points of market share is associated with an added 2.5 points to the rate of return on investment.[7] For market shares in the 40 to 70 range, this is a fine harvest; 10 to 15 points or more above the competitive rate of return. Thus General Motors has been at about 20 percent, IBM at 17, Xerox in the 22–30 percent range, Gillette at 25, and many drug companies are above 20 percent.

Second, the effect of wealth inequality is large. Much large family wealth traces back to major monopolies (Rockefeller, du Pont, Mellon), and the process continues.[8] Worse, the turnover of family wealth has probably slowed in recent years, because the present industrial structure has hardened.

Third, efficiency suffers. Most firms with high degrees of market power must struggle to avoid slackness and waste, often with less than success. Frequently the torpor soaks up all of the monopoly profits; more often it adds 2, 3, or 5 percent to costs and cuts the innovative effort of the firm appreciably. Large-share firms commonly become imitators, and new technology flows primarily from smaller firms.

Fourth, opportunity is narrowed and disequalized. There are fewer points of responsibility and opportunity, both for managers and innovators. The network of financial and old-boy ties is tighter. One effect is that minority groups are more thoroughly excluded. My research shows that both blacks and women fare poorly in big business and financial management, compared to more competitive firms.[9]

Good sense and scientific findings therefore establish a rebuttable presumption that monopoly and shared monopoly are costly, perhaps extravagantly so. The economic burden of proof favors revising them into loose oligopolies or constraining their market power by other means. There problem cases fall into three main categories:

(1) Market power with inefficiency: such as steel, copper, glass, rubber, aluminum, tin cans, electric power, telephones, hospitals, railroads.

(2) Market power with excess profits: such as General Motors, Ford, IBM, Xerox, Eastman Kodak, Procter and Gamble, du Pont, Gillette, and a variety of drug firms.

(3) Government dependents: such as aircraft and engines, milk, sugar, oil.

Market forces are not correcting the underlying structural problems in these industries. In a few cases, modern technology may dictate the structure, and so the monopoly losses may be balanced by gains in efficiency. But in the rest of the cases, there are net losses, some of them running into billions of dollars.

The losses can be defined for each case. The losses also cumulate in the economy to cause much of the recession-inflation problem, which

[6] W. G. Shepherd, "An Analysis of British Industrial Structure, with U.S. Comparisons," *Journal of Industrial Economics*, November 1972.

[7] Shepherd, "The Elements of Market Structure," *op. cit.*

[8] Ferdinand Lundberg, *The Rich and the Super-Rich*, Lyle Stuart, 1967.

[9] W. G. Shepherd and Sharon G. Levin, "Managerial Discrimination Against Blacks and Women," research report, Ann Arbor, 1972.

the British call stagflation. If in fact the U.S. is catching the "British disease," market power is one of the causes.

Viewed another way, there are rich yields to be had from better industrial policies toward the core cases. These gains would be widely spread; nearly all would gain, even many who are presently most openly against effective actions. Granted, industrial policies cannot hope to redress the core social problems, such as the deeper structure of unequal family wealth. Yet they can do much to improve economic performance and widen opportunity for deprived groups, including the mass of white lower-middle class working people.

2. General Policy Guidance

The basic need is to re-establish priorities. Antitrust is presently out of balance and overloaded with tasks. Certain traditional tools should be pressed harder, others dropped, and other new treatments need developing.

J. K. Galbraith is quite right that antitrust policies shield the leaders by bearing down on lesser competitors.[10] The Antitrust Division works mainly on conduct, under Section 1 of the Sherman Act. Section 2 actions to change structure have gone deep into limbo since 1952. The FTC also spends most of its resources policing smaller firms and lesser industries. An increasing variety of sectors are exempt under regulation, which commonly neither controls nor permits potential competition. Other sectors under self-regulation (banks, law, health services) are even more insulated from competition.

The result is a trap. Even in the narrow area of where antitrust has jurisdiction, we won't use the effective tools and we are not developing new ones. So poor industrial performance backs us into such bad expedients as price controls, import controls, and subsidies. Other countries (Britain, Japan, Germany) are not so euphoric about traditional antitrust nor lacking in creative alternatives.[11]

A word on methods. Good policies are clinical in approach, based on a careful weighing of costs and benefits. In each instance one estimates costs (disruption, agency costs) and benefits (better efficiency and equity) and applies the treatment with the best yield. One must discount the amounts for delay and uncertainty, and multiply for precedents. The burden of proof about gains and losses needs to be set evenly rather than, as now in the courts, strongly against changes in the *status quo*. Treatments must be well designed and strategic, as well as adequately funded. And since action takes time, often years, treatments must anticipate changes. Delay is the cancer of antitrust: there must be deadlines and time incentives.

As a matter of content, treatments must deal with the deeper financial ties and controls on firms, not just with their surface forms. In most markets, the bankers give intimate counsel and set limits on what their client firms may do. Effective policies will have to mobilize such insider talents and incentives, and citizen motives via class-action suits, rather than rush headlong up against the best financial and legal talent. In short, grassroots support must be wedded with

[10] Galbraith, *The New Industrial State*, op. cit. See also the lively, critical and, for the most part, accurate pillorying of official policies in Mark J. Green and Associates, *The Closed Enterprise System*, Bantam Books, 1972.

[11] See W. G. Shepherd, "Changing Contrasts in British and American Antitrust Policies," in W. Sichel, ed., *Antitrust Policy and Economic Welfare*, Bureau of Business Research, University of Michigan, 1970.

first-class strategists who can induce compliance rather than try brute force. The older Taft had a brilliant strategist in George Wickersham, a Wall Street lawyer who won Standard Oil, du Pont, and American Tobacco in 1911. Now we will need that brilliance plus new treatments which neutralize resistance.

A certain amount of realigning and reorganizing of market structures may ultimately be needed. But that is only part. On a larger plane, what is needed is a clinical, learning process; it need not be disruptive or obsolete. Rather than turning back the clock, the proper objective is to release the potential of modern industry from its 19th century fetters. I will first review the basic changes which can be tried. Then I will define a more effective use of price controls.

3. Long Run Treatments

The main candidates for treatment are reasonably well known, though the consensus is not close and action would require facts which presently are hidden by the firms and by the Census Bureau.[12] But the primary routes for breaking out of the market-power trap can be indicated. The main lesson is that restructuring is only part of the agenda; there are other ways.

The main possibilities follow:

1. *Further antitrust actions against misconduct.*—These should be continued, with no basic change. More action to loosen patent restrictions is appropriate (a shortening of patent lives from 17 to 5 years has much expert support).[13] Class-action suits could greatly relieve the FTC's task of policing advertising claims, labelling, and the range of other consumerist activities.

2. *Revising structure.*—This can be done both by the Antitrust Division and the FTC, and also possibly, by the new Industrial Reorganization Commission which Senator Hart has proposed in S. 3832, 92d Congress, 2d session, introduced on July 24, 1972. The Antitrust-FTC route offers a surprisingly restricted set of traditional cases. Some candidates (drugs, Xerox) are primarily patent problems, which may require other special treatment. The "inefficient" cases (steel, glass, etc.) will probably not be convicted under Section 2, since courts have usually regarded high excess profits as a necessary sign of monopoly. Advertising-intensive cases (soaps, cereals) will require special treatment and would be novel cases. Finally, courts will be averse to convicting and ordering severe remedies where the monopoly is virtually the company's whole business (IBM, Western Electric). This is, in part, because the courts themselves have no means for making or inducing the changes and easing their effects on third parties.

Still, several cases could be brought whether or not a new Industrial Reorganization Commission is formed. I will touch on several, without trying to be exhaustive.

(*a*) The IBM case could be pressed to trial quickly. Filed in January, 1969, it has bogged down more than necessary in pre-trial delay, partly owing to indifferent handling by the Division.

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[12] The Census Bureau disclosure limits deserve special mention. The Bureau suppresses all information about individual firms, no matter how secure and affected with the public interest they are. Therefore objective data on market shares, financial ties, profits, efficiency—in short, on the core facts about market power and its effects—are denied to the public and to researchers. Worse, this suppression lasts forever; the Census will not even release data from 1900. This policy is ripe for change, for it prevents a clear understanding of the problem, as well as precise policy treatments.

[13] See also Scherer, *op. cit.*

(*b*) Western Electric. This case has existed since 1965 in the Justice Department and could be acted on without delay. This is in fact the tightest industrial monopoly in the world. It deserves at least the clarification which trial would give.

(*c*) Automobiles. No large erosion of GM's large share seems likely within the decade or century. One can deal either with General Motors as a near-monopolist or with GM, Ford, and Chrysler as shared monopolists. I would favor the second route, and such a possible case was prepared in 1968 at the Division.[14] Creating three successor firms to GM and two to Ford would not, on the best information now available, sacrifice more than marginal economies of scale. The realigning could be supplemented by requiring the auto makers to sell wholesale to discounters as well as dealers. These measures—plus imports, the Wankel and other new engines, and the greater variety of future car needs—could make the industry more flexible, efficient, and responsive. If the changes were made carefully, a reversion to the present structure would not be likely.

(*d*) Xerox. In 10 years it has drawn very large profits from the 75-plus percent market share which its patent on the selenium drum provides. It is ingeniously extending this position by pricing and patent strategies, so that by 1978 (when the original patent expires) its position will probably be fixed for decades. Even IBM's entry has had little effect. A suit could be prepared now to ensure that change occurs by 1978.

(*e*) Several older cases need review for possible further treatment: Eastman Kodak in films, General Electric in light bulbs, possibly General Motors in buses (85 percent), and Campbell Soup (80 percent). The grounds would be traditional, but the remedies would vary to fit the industries.

(*f*) Drugs. There is extremely high concentration in many individual drug markets, though the "industry's" total concentration appears to be low. Patents, tightly licensed, permit the drawing of exorbitant profits. Small buyers pay prices many times higher than those charged to big buyers. One possible treatment would be a set of Section 2 cases against the major drug firms fitting these categories, charging abuse of the patent right in goods affected with the public interest. The remedy would be open licensing at royalties set to yield only competitive profits. Ultimately the problem may only be solved by unifying drug purchasing under a new national health program. This has been partially effective in Britain.

(*g*) Procter & Gamble in soaps, Kellogg and others in cereals. These presently look like marginal cases, partly because the remedy to excessive advertising might be difficult to devise. Cereals is the industry which the FTC picked in January 1972 to begin its deconcentration efforts; this case faces an uncertain future, though ultimately it could break important new ground for advertising-intensive industries.

(*h*) Oil and oil-products pipelines. The largest of these (Colonial and Plantation) are owned jointly by oil firms, in ways which probably knit their operations and limit their ability to compete. They could be made wholly independent, dealing at arm's length. The Colonial Pipeline case has been nearly ready since 1968.

[14] See the account of the numerous efforts along this line in Green, *op. cit.*

The other major candidates include steel, certain chemicals, copper and glass. Because of their tendency toward relative inefficiency and low profits, they require different handling. The proposed Industrial Reorganization Commission, referred to above, might be one answer. As proposed in Senator Hart's bill, S. 3832, 92d Congress, the Commission would study seven major industries and recommend or carry out reorganizations to make competition more effective where possession of monopoly power is proved. The proposal deserves careful attention. It is of good legal quality and relatively sound in economic terms. It meets the main economic problems which have gotten Section 2 mired deeply. It is focused on the most important problem industries. It correctly places the burden of proof on the firms, to justify their possession of market power. It sets time deadlines, to prevent the procrastination that has plagued Section 2 in recent years. It provides a basis for private legal action to make sure that public policies are adequate. And it provides an amnesty on the past effects and rewards of market power.

Actually, it can be regarded as a weak medicine. In addition to the amnesty, it is remarkably flexible in the procedures for *recommending* remedies, nor is it clear that there will be financial and managerial resources to deal with the more difficult cases. Even at its best and fullest, it would not abate the whole problem, even within a decade or two. It should be strengthened by granting the Commission authority to change a corporation's directors and links with banks and other financial institutions, for these are what have been failing to enforce higher standards of managerial performance in the past.

In all of these efforts, the basis would be the economic presumption against monopoly and tight oligopoly. If the Courts prove too conservative to accept it, the Industrial Reorganization Commission would presumably be ready to apply it. Ideally, the designation of an industry as needing reorganization would be made promptly, and then it would be up to the firms affected to devise their own best plans for realigning. Tax incentives favoring speed could be applied, so that slow managements would face stockholder suits demanding promptness. The successor firms would normally be more successful than their parent, so that shareholders could eventually benefit from the changes.

Even at its best, this is not an easy process, though it appears to be ultimately desirable. The aim is to unlock the potential gains, but this is not easy to do under intense resistance using the judicial process for delay. Other treatments will also be available and, perhaps superior for many industries.

3. *Performance Investment Bank.*—A new publicly funded performance investment bank could be created, with substantial assets and staffed with professional bankers. It would be able to acquire partial holdings (20 percent would normally suffice) in firms with market power which are not accessible to other treatments. At the least, inferior performance could be publicized; at the most, it could be changed by direct influence on management. The Bank could also support new entrants or smaller competitors in problem industries, which private banks often won't consider because of their own commitments.

This method would economize on public funds since working control often requires relatively few shares. It would mobilize in the new

quasi-public Bank some of the financial and legal talent that is presently immured in the traditional banks. British and Italian experience has shown that this technique can get good results even in cases where the industry's structure is not changed.[15] It has the virtues of being accountable, professional, and subject to economic incentives. Also, it would make large capital gains for the public from the improved performance it would enforce. And it would inject new competition into banking markets.

4. *Tariffs and Quotas.*—An international steel cartel to limit shipments to the U.S. was created in 1968 with U.S. State Department help. In oil, the import quota system has been shown in exhaustive detail to be costly and anti-competitive. Both of these systems could be dismantled without delay. In other problem industries, too, reduction of trade barriers may be a useful step.

5. *Public agency purchases.*—The General Services Administration has recently had great success in forcing lower prices in a wide range of purchases for various public groups. The PX system, the Veterans Administration, the Defense Department, and health programs also can use countervailing power. This can be extended and unified, so that in some problem industries it could become extremely effective. Drugs are one such case.

Taken together, these treatments would solve the main monopoly problems and appreciably improve the performance of the economy. Restructuring is only a part of the objective. Contrary to common impressions, it would focus on a relatively few industries. These should be treated concurrently, not in a sequence, so that everyone sees that the treatment is fair and thorough. For the rest, new directions are needed. As with any innovations, one cannot spell out precise details in advance. What we need is a series of learning processes, experimenting with various angles on the problem. The possible risks in such innovations are, I believe, easily outweighed by the costs of the present situation.

4. Price Controls

While long-run policies have been stalled, short-run action via the price control experiment has been profoundly peripheral, in two senses. First, it has dealt primarily with symptoms, not causes, Second, it has left excess profits untouched in the very cases of high market power which form the core problem in industry. This is because it sets profit ceilings on the basis of previous levels, however high those were. Monopoly returns are therefore largely immune from constraint under the controls. This decision to leave monopoly profits alone was made early and apparently deliberately. It helps insure that the Commission's other elaborate efforts will be futile.

If instead the Price Commission had constrained these profits toward competitive levels, the gains in the performance of the economy could have been substantial. The constraints would have had to be carefully designed, perhaps with sharing provisions to apply incentives for efficiency. But at least the controls would have controlled. Instead they have borne primarily upon lesser firms; to constrain the parlous American Motors while leaving General Motors at more than double the competitive profit rate is a travesty. In fact the Price Commission

[15] Shepherd, "Changing Contrasts . . .," *op. cit.*, and M. V. Posner and S. J. Woolf, *Italian Public Enterprise*, Duckworth, 1967.

has *de facto* added a degree of legitimacy to these profit rates, by approving them officially.

5. In Summary

Altogether the inaction on market power is breathtaking, in light of what is at stake, the raw data for analysing the problem firms—their market shares, profit rates, financial ties, efficiency—are locked up in the Census Bureau or not collected at all. Antitrust actions toward them are stalled. Other possible treatments are not being explored. And the Price Commission is, tacitly if not openly, tending to legitimize the resulting profit rates.

Since 1968, there has been virtually no antitrust action toward established market power in the core industries, and the other types of action have been ignored. Further the price control apparatus has been carefully designed to permit, rather than to limit, the pre-existing degree of profitability in these and other industries. One cannot be sure how extensive the changes in market structure and excess profits would need to be, if genuine treatments were at long last to be tried and the moratorium on restructuring since 1952 were to end. Yet it seems clear that moves in that direction would be appropriate and they may be necessary if stagflation is to be solved.

THE PRICE COMMISSION AND REGULATED UTILITIES

By ROGER G. NOLL*

During the past few months the Price Commission has delegated nearly all of its authority to control public utility prices to the numerous state and federal regulatory agencies. The essence of the Price Commission's policy is that if a regulatory agency adopts certain rules and procedures for reviewing requests for price increases, then any price increase that it approves will not be subject to review by the Price Commission. Firms that are regulated by agencies that do not adopt the prescribed procedures or that are unregulated need only notify the Price Commission of a price increase if (1) they are pre-notification firms—i.e., they have annual sales of $100 million or more—and (2) the price increase will raise total revenues by more than 1 percent. Otherwise, firms need only make a public announcement of a price increase, certify that it is in compliance with some general criteria for price increases, and keep information available to the public substantiating the certification for 60 days (or longer if the Price Commission so instructs).

The theory of the Price Commission's decision on price controls for public utilities is that regulatory agencies already perform more or less the same function that the Price Commission is expected to perform for the entire economy. A regulatory agency's mandate is to ensure that the market power of a utility, arising from its position as either a monopolist or a member of a very tight oligopoly, shall not be used to capture excessive profits. Under their formal procedures, most agencies interpret this mandate to mean that prices should be increased only if an increase in costs causes the firm to earn profits less than are necessary to induce capital into the industry. Although the Price Commission's own procedures for determining whether a proposed price increase is cost-justified may differ from the procedures of regulatory agencies, the Commission obviously felt that the procedures were similar enough so that, with a few guarantees by the agencies, the Commission could more wisely allocate its own scarce technical resources by essentially withdrawing from the regulated sector.

To evaluate the Price Commission's decision on utility pricing requires examination of two issues. First, has the Commission set strict enough requirements for the pricing procedures of regulated firms so that the formal justifications for price increases in the regulated sector will conform reasonably well to those applied to firms in other industries? Second, regardless of the formal procedures that regulatory agencies adopt, are these agencies likely to be as effective as the Price Commission in minimizing the contribution of the public utility sector to overall inflation? Both issues emphasize the relative position of the regulated sector in the price control program, not the broader issue of whether the price control program is desirable.

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The Effectiveness of Regulatory Agencies

Most scholars who have examined the performance of regulatory agencies agree that the Price Commission has picked an especially weak governmental institution to which to delegate its power to control utility prices. [1] Even former regulatory commissioners have expressed great dissatisfaction with their own agencies. The essence of the criticism is that agencies are overly protective of the interests of the firms they regulate. This is not manifested so much in excessively high rates of profit on invested capital, although these do occasionally appear, but in allowing firms to pad their costs (especially those costs that enter into the basis for calculating the profits a firm is allowed to earn) and in preventing competition by dividing markets, setting minimum prices, and limiting entry into the industry, much as would an effective cartel.

During periods of inflation, the real cost pressure on a regulated firm is normally much less than for industry generally. An abnormally high fraction of the costs of most public utilities are amortization and depreciation of long-lived capital assets. A large part of these expenses reflects the prices of years past, and does not increase with current inflation. In addition, productivity gains in the public utility sector are far in excess of the average for industry, so that a much larger increase in current costs can be absorbed in productivity gains. One would therefore expect inflation to be less predominant in the regulated sector than elsewhere in the economy—if regulatory agencies were vigilant in enforcing a system of cost-plus pricing.

Working against the regulatory agency is the incentive of the regulated firm to raise prices during an inflation. Of course, regulatory rules do not permit straight-forward price increases by a healthy firm with no change in costs, for then the firm's rate of profit would exceed the regulatory norm. Instead, the firm must increase the costs used to calculate the allowed profit rate in order to justify a price increase. It achieves this end by promising new services (even if the services are not economically justified), arguing for greater reserve capacity, or using overly optimistic forecasts of future demand to justify an increase in capacity. Since few agencies have the technical capability to verify the need for proposed investments, and since the agency will be held responsible if shortages occur or service quality diminishes, the likely result is to accept the firm's analysis, agree that the additional investment is desirable and allow the firm to increase prices and earn additional profits.

Any firm with market power will have similar incentives if it is subjected to price controls. In response to growing demand, the strategies available to the firm vary between two extremes: (1) padding costs, raising prices, and thereby earning larger total profits (the same percentage profit on a higher cost base for the same output), and (2) holding unit costs and prices constant while expanding output, thereby earning greater profit (the same profit per unit of output, but earned on the greater total costs incurred in producing more output). The optimal strategy for a firm that cannot capture further

[1] See, for example, Marver H. Bernstein, *Regulating Business by Independent Commission* (Princeton, 1955), The President's Advisory Council on Executive Organization, *A New Regulatory Framework: Report on Selected Independent Regulatory Agencies* (U.S. Government Printing Office, 1971), Roger G. Noll, *Reforming Regulation: An Evaluation of the Ash Council Proposals* (Brookings, 1971), and numerous other studies reported in these references.

economies of scale and that is to some extent insulated from competition will, in general, be somewhere between these extremes, involving some degree of cost padding.

Detecting unnecessary costs and investments is a difficult job for anyone, for a firm always knows more about its own costs, technology, and markets than does a regulatory agency or the Price Commission. Regulatory agencies may have some slight advantage by virtue of their specialized responsibilities and experiences, but this should not be overrated. Most state regulatory commissions are responsible for all types of public utilities (transport, power, communications, etc.), and even the specialized federal agencies deal with many firms operating in numerous markets. And in all cases, but particularly at the state level, the size and quality of the agency's technical staff falls far short of what would be necessary to monitor carefully the firms it regulates.

On the two following other counts, the Price Commission is likely to do a better job in controlling prices than would a regulatory agency.

1. The Commission's Single Purpose

The Price Commission's mandate deals only with prices, while the regulatory agency is usually responsible for regulating profits, the availability of service, and the general state of the industry. While the Price Commission is concerned about these other indexes of economic performance, it regards them as constraints on its objective of minimizing inflation, not as encompassing a set of additional objectives that are inconsistent with—and therefore require some compromise with—its mandate on prices.

This difference is illustrated by the attitudes of the Price Commission and of many regulatory agencies on profit margins. The Commission's view is that profit margins on sales should be held at historical levels. If inflation causes the cost of capital to increase, the Price Commission would not expect a firm to raise prices so that its rate of return to equity could be kept in line with higher interest rates. Yet most regulatory agencies have responded in the opposite manner, granting increases in allowed profit rates as interest rates have risen. In addition, regulatory agencies have increasingly granted price increases for the purpose of financing new investment within the firm when the firm demonstrates that borrowed or equity capital is not available, or available only at very high cost. Thus, in trading off the objectives of industry growth, service availability, and price stability, the last was compromised to promote the first two.

Another difference between the Price Commission and regulatory agencies is in the view they take of opportunities for reducing costs, through either increased competition or improved technology. Because of their concern over the general health of the regulated industry, regulatory agencies are reluctant to make decisions that significantly alter the structure of the related industry. Low-cost competitors are normally not allowed to capture more than their historical share of the market (new entrants are rarely allowed), and cost-saving technological innovations are introduced slowly so that all firms can share in

the benefit and a minimal amount of capital embodying the old technology is made obsolete.[2]

This protects inefficient firms and technologies, and produces prices that are higher than necessary (even though "justified" by higher than necessary costs).

The Price Commission has not been actively promoting competition and cost-reducing innovation, but it has certainly had a much more beneficial effect along these lines than regulatory agencies. First, it does not attempt to control price reductions as well as price increases. Competitors are free to reduce prices if they desire. Of course, an even more desirable stance for the Price Commission would be to force price reductions when productivity and profit margins rise; however the Commission's current passive policy is still preferable to that of the regulatory agencies, which normally require that any price reduction be subject to the same formal procedures and determinations of impact as a price increase. Second, the Commission is not involved in the attempt to regulate the choice of technology by firms, leaving them free to adopt less costly alternatives. In fact, it has tried to put some minimum limit on the amount of productivity gain a firm must include in calculating a cost-justified price increase, although the policy it has settled on—a firm is now essentially free to select its own method of estimating future growth in productivity—is only slightly better than no requirement at all. While the Price Commission has failed to provide a strong incentive for productivity increases nevertheless here, also, its rather passive policy is better than that of most regulatory agencies.

2. The Visibility of the Price Commission

Another major difference between the Price Commission and most regulatory agencies is the extent to which their policies and decisions are scrutinized by the press, the public, and the Congress. Most regulatory agencies rarely catch the public eye. Their activities are scarcely reported in the press, and are followed closely only by the subcommittee in each branch of Congress that oversees their activity. By contrast, the Price Commission is constantly in the news. It deals with the politically charged issue of inflation, and consequently its activities are covered by the media and are potentially grist for the politician's mill.

Perhaps this is best exemplified by the attention that public utility price increases received when approved by regulatory agencies and when later ratified by the Price Commission before the Commission withdrew from the field. Individual increases granted by each agency went largely unnoticed except for a few spectacular cases such as the New York State telephone rate increase. But when a large number of these cases were reviewed and approved by the Price Commission, they

[2] An obvious example of this behavior is the agonizingly slow pace at which communications satellites have come into use in the United States. It is unlikely that the nation's first domestic communications satellite will be put into use within ten years after a private, profit-seeking enterprise—the American Broadcasting Companies—requested permission to set up a satellite system for distributing network television programs, and after a nonprofit entity, the Ford Foundation, showed that such a system would substantially reduce costs and proposed that these savings be used to finance public television. For other examples, see William M. Capron (ed.), *Technological Change in Regulated Industries* (Brookings, 1971), and Ann F. Friedlaender, *The Dilemma of Freight Transport Regulation* (Brookings, 1969).

together constituted enough of an issue to generate a debate on the floor of the Senate, coverage in the press, and concern by the Joint Economic Committee.

The set of 110 public utility price increases ratified by the Price Commission during the last three months of fiscal 1972 (inserted in the *Congressional Record* by Senator Lee Metcalf on August 17, 1972) gave rise to an investigation of the Price Commission's policies, but no concomitant investigation of any of the regulatory agencies that originally granted the increases is underway. If the Price Commission has erred in approving these increases, then surely, too, have the agencies that granted them. But the Price Commission offers a focus for broad evaluation of the price performance of an entire sector of the economy. No single regulatory agency has made a large enough number of price decisions in the past few months for a trend to be detected in its behavior; however, the scope of the Price Commission's responsibility means that its decisions are numerous, the trends in its policies more obvious, and its effectiveness easier to see.

Comparative Price Performance

The preceding analysis leads to the conclusion that, while utility prices should probably rise less rapidly than other prices during an inflation due to the importance of capital costs and productivity improvements in the sector, the price performance of the sector, being regulated by relatively ineffective agencies, will not reflect these cost advantages. The data in Table 1 bear this prediction out. It shows the price increases allowed by the Price Commission up to June 30, 1972.

TABLE 1.—PRICE INCREASES GRANTED BY PRICE COMMISSION THROUGH JUNE 30, 1972

Sector	Average percentage price increase allowed	Average percentage price increase allowed excluding TLP's [1]
All industry	3.1	4.2
Manufacturing	5.3	7.0
Wholesale and retail trade	2.6	3.2
Utilities	5.7	11.5
Finance, insurance, etc.	12.7	13.4
Services	2.4	2.5
Construction	2.0	3.6
Mining	3.5	4.1

[1] TLP refers to "term limit price" agreements, in which a firm agrees to limit the total effect of its price increase to raising total revenues by less than 2.2 percent annually. In return, the firm does not have to seek approval for each specific increase in prices.

Source: Barry Bosworth, "Phase II: The U.S. Experiment With an Incomes Policy," Brookings Papers on Economic Activity 2: 1972, p. 371.

Although the Price Commission formally approved utility price increases granted by regulatory agencies until its current rules were adopted, it nevertheless always acted essentially to ratify what the agencies approved. Consequently, the utility price increases that did take place reflect the decisions of the regulatory agencies rather than what the Price Commission could have achieved had it made the effort to control them. As the data show, price increases in utilities exceeded those in all sectors except financial services. The behavior of the price

indexes since the freeze shows a similar disparity. For example, the gas and electricity component of the Consumer Price Index rose 4.7 percent between the summers of 1971 and 1972 (an average over monthly figures for June, July, and August, which measures performance in the year following the freeze). The electrical power component of the Wholesale Price Index rose 7.0 percent during the same period. Both figures exceed the average for all goods and services in the total indexes of which they are a part. These figures should at least raise doubts that Phase II has had any appreciable effect on the public utility sector.

The New Price Commission Policy

It is possible that the apparently poor price performance of the utility sector during the past year, and the relatively weak capability of regulatory agencies to cope with the problem, could be overcome by the Price Commission's new rules. If the requirements for regulatory agencies to be certificated were strict, and if firms not regulated by certificated agencies were controlled as closely as other firms, the preceding argument would be plausible, although it would still have to contend with some inherent problems in the structure and operations of regulatory agencies as enumerated in the preceding section. But the Price Commission has, in fact, made no real attempt to alter the criteria and procedures of regulatory agencies, nor has it instituted controls on unregulated utilities that are as tight as those on firms in other industries.

Requirements for Certification

In its rules and regulations, the Price Commission has set forth a set of general criteria that must be met if a price increase by a public utility is justified. These criteria are:

(1) The increase is cost-justified and does not reflect future inflationary expectations;
(2) The increase is the minimum required to assure continued adequate and sae service or to provide for necessary expansion to meet future requirements;
(3) The increase will achieve the minimum rate of return needed to attract capital at reasonable costs and will not impair the credit of the public utility;
(4) The increase does not reflect labor costs in excess of those allowed by Price Commission policies;
(5) The increase takes into account expected and obtainable productivity gains, as determined under Price Commission policies; and
(6) The procedures of the regulatory agency provide for reasonable opportunity or participation by all interested persons or their representatives in the agency's proceedings.[3]

Because the criteria are, in many ways, quite vague, the General Counsel of the Price Commission, the General Counsel of the National Association of Regulated Utility Commissioners (NARUC), and the New York State Public Service Commission worked out a "model rule" that, if adopted by a regulatory agency, would satisfy the Price Commission. On April 20, 1972, the General Counsel of the Price Commission, in a letter to NARUC, detailed the substance that a regulatory agency's rules should contain in order to merit a certificate of compliance. In addition to insisting that the agency's formal procedural rules include the general criteria listed above, the letter

[3] *Federal Register*, Vol. 37, No. 181 (September 16, 1972), p. 18894-5.

made several other points. First, cost increases would have to be quantifiably provable. Second, no costs would be included for projects that were not operational. Third, agencies could allow "regulatory lag"—i.e., productivity increases that raised profits above the "fair rate of return" allowed by the agency would not necessarily have to be passed on immediately as price reductions. Fourth, no exceptions were to be granted to the criterion having to do with the pass-through of wage increases. Fifth, since speculative cost increases were not permitted, only provable productivity gains were to be included in cost estimates.

As amplified in the letter, the Price Commission's rules add only one constraint to the normal behavior and policies of regulatory agencies—the requirement that companies absorb wage increases that exceed the Commission's standard, currently 5.5 percent a year. Other than this, the rules include some of the most questionable practices of regulatory agencies, and, in the case of productivity changes, introduce a procedure that is worse than many agencies already practice.

The second criterion places no constraint on agency behavior, for it simply restates the vague objective given nearly all regulatory commissions. The agency still must define "adequate," "safe," and "requirements," and decide how these objectives will be traded off with others, such as efficiency and price stability. In the last clause, it also ratifies a major new (and highly dubious) practice for regulatory agencies to grant price increases so that an investment can be internally financed by the firm, which was the basis for the enormous increase in telephone rates granted by the New York State Public Services Commission. (If customers must pay rates that allow the regulated firm to earn a fair rate of return *and* that pay for the firm's new investments, they should at least be given a proportional amount of stock in the company!)

The third criterion states that a public utility should not have its credit impaired. While this could be subject to several possible interpretations, it could mean that the ability of the firm to raise capital at a given interest rate should be independent of cyclical conditions. This, of course, would mean that in a period of inflation, when interest rates are high, the profits of the firm would have to be increased significantly if the interest rate available to the firm is to remain constant. It could also mean that the credit of the firm should not be affected by its investment policies and the amount of credit it is trying to raise—i.e., that regulatory commissions should ratify through price increases whatever operations the company undertakes in the capital markets.

Two other clauses in the Price Commission's rules further weaken whatever impact the general criteria might have. First, the agencies need apply the six criteria only "so far as those criteria are consistent with the constitutional and statutory provisions under which the regulatory agency operates."[4] Thus, although no such provision is contained in the Economic Stabilization Act, the price control program is made subordinate to all federal and state laws relating to public utility regulation. Second, the rules the agency adopts in order to obtain its certificate of compliance "shall not displace any other

[4] *Ibid.*, p. 18895 (Title 6, Chapter III, Part 300, Section 300.304(b)).

rules or laws to which the agency is subject or which it has adopted which are not consistent with these rules." [5] Not only is the price control program subordinate to regulatory laws, it is also subordinate to any other rules an agency may have adopted.

Finally, after more discussion with regulators, the Price Commission even backed off on its insistence that wage increases in excess of Price Commission policy be absorbed by the firm. In the model set of rules, which now have been adopted by nearly all state regulatory commissions and certified by the Price Commission, wage increases above 5.5 percent will be considered by the agency on a case-by-case basis to determine if it would cause "undue hardship on the employer if it were disallowed." [6] Federal agencies have exercised more individuality, writing their own procedures instead of adopting the model rule, but have made similar exceptions to the wage criterion. [7] The Price Commission has thereby delegated the authority to determine when its own policy on wage pass-throughs should be violated. At minimum, one would have expected the Commission to preserve its right of review of price increases based upon wage increases in excess of its own guidelines. But the Commission has reserved no such right: "The decisions of a regulatory agency pursuant to rules covered by a certificate of compliance . . . are not subject to review by the Price Commission. . . ." [8]

The Price Commission's guidelines for regulatory agencies appear to have absolutely no consequence. As Commissioner Nicholas Johnson of the FCC put it, "It is pretty much the view here that the Price Commission criteria add *nothing* to the standards this agency uses in deciding rate increases." [9] As proof, Commissioner Johnson offered the fact that hearings on the request of the American Telephone and Telegraph Company for a $500 million rate increase, which had been closed prior to the Price Commission's new policy, were not reopened to take evidence to determine whether the requested increase was consistent with the Price Commission's criteria. It is fair to conclude that the regulatory agencies will continue to operate as they have in the past. The new rules will do nothing to alter the policies of the agencies, to make them more effective, or to improve the rather poor price performance of the regulated sector during the past year.

Direct Controls on Other Utility Firms

Not all public utilities are regulated, and not all regulatory agencies will obtain a certificate of compliance. For firms that are not regulated by a certificated agency, the Price Commission will retain responsibility for the price control program.

The Price Commission has divided all utilities into two classes, using annual sales of $100 million as the dividing line. Firms with less than $100 million in sales may increase prices by any amount as long as the firm notifies its customers of the increase by letter or through a

[5] *Ibid.*, p. 18895 (Title 6, Chapter III, Part 300, Section 300.304(e)).

[6] See almost any set of procedures to comply with the Price Commission rules, such as "Special Rules in Compliance with Economic Stabilization Program," Public Utilities Commission of the State of Alabama, p. 5.

[7] For example, the Civil Aeronautics Board states: "The Board will determine, on a case-by-case basis, whether extraordinary circumstances exist which would result in gross inequity or extreme hardship if identified wage or salary costs in excess of said guidelines were disallowed." (CAB Rule ER-229.4(b)(2).)

[8] *Federal Register* (September 16, 1972), p. 18895 (Title 6, Chapter III, Part 300, Section 300.304(e)).

[9] Dissent of Commissioner Nicholas Johnson, FCC ruling on special provisions for price stabilization program, p. 8.

general circulation newspaper. Although notice must predate the price increase, there is no minimum necessary elapsed time that must pass between the notice and the increase. In addition, the firm must certify that the price increase conforms to the six general criteria for public utility price increases listed above, and must make available for public inspection information to support the price increase. The Price Commission's rule does not require that the Commission be notified of the price increase, although the Commission reserves its right to investigate the price increase for compliance with its general criteria and to rescind or alter the price increase on the basis of that investigation. Apparently the Price Commission is relying upon complaints from customers to call its attention to unwarranted price increases, for most price increases will never become known to the Commission unless a complaint is lodged.

For a firm with more than $100 million annual sales, any price increase that raises total revenues by 1 percent or less is subject to the same procedures as are all price increases by the smaller firms. This is in sharp contrast to the requirement for other "Tier I" firms—firms in other sectors with annual sales exceeding $100 million—which must notify the Price Commission of all price increases before they take effect, and even for "Tier II" firms—those with $50 million to $100 million in annual sales—which must submit a quarterly report of all price increases.[10] For most firms, the rule places no effective limit on price increases, for few services make up so large a part of total revenues that even a large price increase would cause total revenues to increase by 1 percent. Even utilities offering a single service, such as electric power or natural gas, have numerous rate schedules for different types of customers and in different geographical areas. If each of these rates is raised at a different time, a very large overall price increase can be achieved without having any single increase exceed the 1 percent benchmark. And by adopting this strategy, the utility need not report its price increases to the Price Commission.

For price increases that would increase total revenues by more than 1 percent, a firm must notify the Price Commission within three days after the increase is authorized by an uncertificated agency and 60 days prior to the rate taking effect, during which time the Commission may review and alter the increase. The rate becomes effective if the 60 days pass without Price Commission action.

If the Price Commission were to police these large rate increases relatively intensively, an important effect would be to provide an incentive for firms to have more frequent rate increases so that the benchmark of 1 percent would not be exceeded. The Price Commission has tried to avoid this phenomenon by its ruling on interim rate increases. Only one interim increase of a given rate can be granted by any regulatory agency while a rate determination is being undertaken.[11] Interim rates are often granted by agencies during rate hearings because these proceedings can drag on for months or even years. The ruling prevents a firm from getting several such interim increases which, together, might exceed the 1 percent benchmark, although no single increase did. Unfortunately, the rule was blunted by the Price Commission's decision to apply it only to interim increases

[10] The exception to this generalization is a firm that has signed a term limit price agreement in which it promises to hold all price increases to an amount that will cause the total revenues of the firm to increase by less than 2.2 percent per year.

[11] *Federal Register* (September 16, 1972), p. 18895 (Title 6, Chapter III Part 300, Section 300.307(c)(a)).

that would increase revenues by more than $5 million.[12] An agency could grant a series of interim increases as long as each accounted for less than $5 million, regardless of the amount of the rate increase as a fraction of total revenues or of the price of the relevant service.

In addition, the limitation on interim rates does not deal with the possibility of a firm obtaining more than one final rate determination per year. If a regulatory agency wants a firm to have a large rate increase and wants to avoid the necessity of the firm having to report the increase to the Price Commission, it can speed its own hearing process and allow more frequent final rate determinations.

Conclusions

On all counts, the Price Commission's policy toward public utility price increases appears to be nothing more than a ratification of how utility prices are now set—even for unregulated firms. The Price Commission's faith in this policy cannot stem from the strictness of the rules it has set forth for regulatory agencies to follow, for these rules place no significant constraints on the current behavior of the agencies. It is also hard to imagine that the Price Commission's policy is based upon a belief that the regulatory agencies are especially effective vehicles for implementing a price control program, for the professional literature on the performance of the agencies and the recent behavior of utility prices give no cause for confidence. In short, the Price Commission has chosen to all but exempt from the control program a regulatory mechanism that has performed poorly over the past few years. One can only condone this action if one believes that the entire control program should be dismantled and that the public utility policy is simply a good first step.

Even if the Price Commission had decided to pass on much of the responsibility to implement the control program, one would have expected the Price Commission to have retained some oversight. For example, the Price Commission could have retained the right to review and alter rate increases by certificated agencies if the rate increase: (1) was based on wage increases exceeding the Price Commission's policy for wage pass-through, (2) included revenues exceeding allowed profits that were to be used for financing investments by the utility, (3) caused the profit of the utility as a percent of sales or equity to exceed the highest level achieved during 1968–71, or (4) was part of a series of rate increases that, within one year, caused the total revenue of the utility to increase by more than 3 percent (or some other figure to be set by the Commission). In addition, firms not regulated by a certificated agency should be subject to reporting requirements that are similar to those for other firms. Specifically, all firms with over $50 million sales should, at minimum, be subject to the rules for Tier II firms elsewhere in the economy—that is, at least quarterly reporting of all price changes, regardless of the effect of each change on total revenues. Finally, interim rate increases should be permitted only if cost-justified, and should also be subject to Price Commission review if granted by regulatory agencies that are required by law to grant them after a minimum waiting period while a final rate investigation is under way. In addition, the Price Commission should retain the right to review and alter interim rate

[12] *Ibid.*, Section 300.307(b)).

increases that have any of the four characteristics listed above that would justify review of final rate increases.

All of these "fail-safe" clauses would still permit the Price Commission to avoid evaluating most price increases by regulatory agencies. The very existence of a Price Commission review authority for increases that raise serious questions of compliance with the overall control program would limit the number of outrageous requests for price increases. And, of course, retaining the right of review for these cases would guarantee a minimum degree of effectiveness of the program.

CONTROL OF FOOD PRICES

By G. E. BRANDOW*[1]

Two points in time are useful benchmarks against which to measure changes in food prices. The first is 1964, the year before the accelerated inflation of the latter 1960's began. The second is August 1971, the month when the current policy of price and wage controls was initiated. Table 1 summarizes price changes between those benchmark dates and August 1972.

From 1964 to August 1972, average prices of food purchased by consumers in stores for home consumption rose somewhat less than prices of nonfood items, taken together, in the Consumer Price Index (CPI). Prices of food purchased in restaurants, hotels, etc., rose considerably more than store prices of food, with the result that the increase in the "all food" price index was very close to the increase in nonfood prices. From August 1971 to August 1972, however, prices of food in stores and in eating-out establishments rose equally, and the increase was greater than for nonfood prices.

The main reasons for the upward sweep of retail food prices over the 8-year period have had much in common with the reasons for the increase in the CPI. Incomes were rising, thus increasing money demand for goods and services. Production costs in industry and agriculture were also rising except where unusual gains in total productivity were being made. Higher costs restricted output expansion in purely competitive markets and led to more or less concurrent increases in prices and margins in sectors characterized by some degree of oligopoloy.

TABLE 1.—PERCENTAGE INCREASES IN RETAIL PRICES BETWEEN 1964 AND AUGUST 1972 AND BETWEEN AUGUST 1971 AND AUGUST 1972.

[Computed from seasonally adjusted indexes]

Product groups from Consumer Price Index	1964 to August 1972	August 1971 to August 1972
Food consumed at home	30.7	3.8
Beef and veal	53.6	10.5
Pork	45.4	17.2
Poultry	10.6	−1.4
Fish	62.0	8.3
Eggs	−2.3	−4.3
Dairy products	29.9	0.5
Fats and oils	28.7	0.1
Fresh fruits and vegetables	35.6	4.7
Processed fruits and vegetables	18.5	1.9
Cereal and bakery products	23.6	−0.1
Sugar and sweets	19.6	0.2
Beverages	17.7	−1.1
Food consumed away from home	48.3	3.8
All food	34.1	[1]3.9
All CPI items less food	35.4	2.8
Consumer Price Index	35.2	3.0

[1] This figure differs from the expected value of 3.8 because of rounding off of discrepancies.

Source: Bureau of Labor Statistics, except fats and oils for which a more inclusive but not seasonally adjusted index of the U.S. Department of Agriculture was used.

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[1] This paper was prepared in October 1972. As of January 1973 it appears that the estimates given here for the overall increase in food prices during 1973 are somewhat too low. Prices paid by livestock producers for feed grains will be higher than expected, leading to higher livestock product prices. A 5 percent overall increase in food prices during 1973 now seems a better estimate than the 3 percent estimate made in this paper. There is no reason at this time, however, to change the estimate made in this paper of the further increase in food prices from 1973 to 1974.

For food sold through retail stores, about 60 percent of the consumer's dollar goes to processors and distributors. The margin or price spread going to processors and distributors for such food increased 25.2 percent between 1964 and August 1972 and 1.6 percent between August 1971 and August 1972. The corresponding figures for increases in farm prices of food products were 40.6 percent and 9.0 percent.[2]

A few special considerations regarding increases in food prices should be noted. The increase in demand for beef has been remarkable. Retail prices of beef and veal rose 53.6 percent between 1964 and 1972 despite an increase of about 12 percent in *per capita* supply. *Total* beef and veal supply would have had to increase by 6 or 7 percent annually in the inflationary 8-year period to prevent an increase in retail price, a rate of increase that was not possible in practice. The principal obstacle has been the difficulty of expanding the supply of cattle for feedlots rather than obtaining grain for cattle in feedlots. The more-than-usual increase in pork prices came after August 1971 and occurred largely because low hog prices in the preceding 12 months, coupled with high feed prices due to corn blight, induced farmers to cut back hog production. Fish prices were boosted by strongly rising demand for the product in its own right, by high prices for red meats, and by limited ability to increase supply.

Price changes for poultry and eggs reflected exceptional increases in total productivity on the part of producers, together with ability to increase output of the products rather quickly (in contrast, say, to beef). Larger supplies resulting from technological advance subjected egg producers to an intense profit squeeze in 1971–72.

Government price support programs stabilized prices of feed grains over the 8-year period. The support (loan) levels for the 1963 and 1964 corn crops were $1.07 and $1.10 per bushel; for the 1971 and 1972 crops, the support level was $1.05. This was highly important in holding down advances in prices of meat and poultry products, for which feed grains are a large proportion of production costs. Wheat supports (loan values) were lowered substantially after June 1964, but the effect on prices of flour and cereal products was approximately cancelled by a tax on wheat milled for domestic food use. Huge Russian purchases lifted wheat prices well above the support level after early August 1972. Price support for milk for manufacturing uses was raised 56 percent between 1964 and 1971–72, and minimum prices for milk consumed in fresh form were substantially increased under government marketing orders. Prices of meats, poultry, eggs, fruits and vegetables, and most fats and oils have been influenced in minor degree at most by government price programs (except for the indirect effect of approximately stable feed grain supports on prices of meat, poultry, and eggs).

Assumptions

Primary attention in this paper is given to prospects for food prices in 1973 and 1974. Food prices in those years will be affected by general economic conditions that cannot be foreseen with certainty. I assume that economic expansion will continue and (especially relevant to the demand for food) that personal income will increase about 8 percent annually as in the recent past. In the absence of price and wage con-

[2] Strictly, these data refer to U.S. farm-produced foods whereas Table 1 includes imported foods and fish.

trols, unit costs of labor and nonfood materials in producing, processing, and distributing food are projected to increase 3 or 4 percent per year except in instances where productivity rises especially rapidly. For purposes of appraising export demand for farm food products, I assume continuing inflation abroad, stability of exchange rates, and no unusual foreign purchases such as those recently made by Russia.

Another important set of assumptions relates to weather and other natural hazards that might upset the flow of products from the nation's farms. I can only assume that no acts of nature will materially reduce crop production or force distress cattle on the market for lack of sufficient pasture.

Prospective Food Supplies and Prices

Feed grains.—Though domestic utilization and exports are expected to be large, supplies for the current crop year are abundant. The carryover into the 1973 crop year should be ample by any standard. In 1972, producers set aside (held idle) about 37 million acres of cropland under the government's feed grain program, and although not all of these acres would return to crop production in the absence of a program, enough land is available in operating farms to meet any probable demand in the next few years.

Prices advanced in September 1972 when prospective utilization, bolstered directly and indirectly by Russian grain purchases, appeared likely to exceed the 1972 crop. USDA is not permitted to release the stocks it owns at less than 115 percent of the loan rate plus carrying charges. If USDA releases stocks as it is permitted to do, no more than a normal seasonal advance seems likely following the fall of 1972. If the feed grain program is operated to replenish stocks when low and if stocks are freed as permitted, feed grain prices can be fairly stable for several years.

Another important component of livestock feed concentrates is high-protein feedstuffs. Prices are likely to average higher in 1973 than in 1972 and to continue high in 1974. In view of the grain and the high-protein situations taken together, producers of meat, dairy, and poultry products are likely to face somewhat higher feed prices in 1973 and 1974.

Wheat and cereal products.—The wheat situation in the summer of 1972 was much like that for feed grains—large supplies on hand and a substantial acreage set aside under the government's program but available for later production. Large purchases by Russia created prospects that exports during the 1972 crop year would far exceed past records, and prices rose sharply in August. Since the main wheat crop is seeded in the fall, the government's wheat program for 1973 had already been announced and called for the maximum set-aside of acreage permitted by law. Nevertheless, farmers may have increased acreage seeded to wheat in the fall of 1972, less wheat will be used for feed, and the tight supply situation for hard red winter wheat may be materially eased when the 1973 crop is harvested. Acreage can be much expanded for the 1974 crop. If the weather is good, wheat prices should be lower in the fall of 1973 than in the fall of 1972, and prices in the fall of 1974 could be down close to support levels.

None of this will make a large difference in retail prices of cereal and bakery products. In the summer of 1972, the farm value of grains

typically made up only about one-eighth of the price paid by consumers for foods of this class. A change of 50 percent in farm grain prices would alter retail prices only 6 or 7 percent if fully passed on to consumers. Changes in processing and distribution costs usually are much more important to retail prices than are changes in farm prices. Prospects are that in the absence of price controls, retail prices of cereal and bakery products will be 2 percent higher in August 1973 than in August 1972 and will rise nearly as much in the year after that.

Fats and oils.—Strong increases in soybean production to meet rising demand stemming mainly from the livestock feed market have created large supplies of oil. Supplies of cottonseed oil also were high in 1972. Average prices of food oils may stay near the reduced level of the fall of 1972 and are unlikely to become seriously inflated. Retail prices will be only slightly affected by moderate changes in basic oil prices but are likely also to reflect the gradual increase in processing and distribution costs assumed for 1973 and 1974. The retail price index may advance 1 to 3 percent in each of the two years following August 1972.

Fruits and vegetables.—Supplies of this class of foods, especially of fresh produce, are particularly vulnerable to weather, which was generally unfavorable in the summer of 1972. Prices of several fresh fruits and vegetables in August 1972 reflected reduced production. If weather in 1973 and 1974 is normal, the retail price index for fresh fruits and vegetables may be 2 percent or so lower in August 1973 than in August 1972; but by August 1974 the index may have risen as much above the August 1972 level.

The prospective supply and price situation for processed fruits and vegetables in 1973 is mixed, but grower prices, on the average, may rise a little. The large proportion of the consumer's dollar going for processing and distribution waters down the effect of producer prices on retail prices and correspondingly increases the importance of changes in nonfarm costs. The index of retail prices of processed fruits and vegetables is likely to rise by approximately 2 percent in the 12 months following August 1972 and slightly less than that in the next 12-month period.

Pork.—As a result of depressed prices earlier, pork supplies were low in 1972 and are likely to remain low (aside from seasonal fluctuations) until the fall of 1973, when supplies should begin to increase in response to recent high prices. Supplies are likely to rise throughout 1974. Retail pork prices may be slightly lower in August 1973 than in August 1972 and 10 to 15 percent lower by August 1974.

Beef.—Beef is the most important food item and the biggest enigma. As a result of high prices, breeding herds are being expanded, but the immediate effect is to reduce marketings of cows and heifers that otherwise would add to the current beef supply. Marketings from feedlots are moderately adjustable to producers' expectations about prices in the near future. Though the long-term outlook is for higher prices because of the strong increase in demand for beef, retail prices could be lowered by reduction of cattle numbers in breeding herds or (for short periods) in feedlots. Perhaps the best guess is that the index of retail beef and veal prices will rise approximately 5 percent in each of the two years following August 1972.

Poultry and eggs.—The retail price index for poultry has been fairly stable for four years. A small increase, perhaps 2 percent, seems likely between August 1972 and August 1973. No increase is forecast for the following year in light of the expected decline in pork prices. Egg producers, however, have been so beset by low prices in 1971 and 1972 that reduced production and higher prices are now in prospect. Retail egg prices in August 1973 may be 8 to 10 percent higher than in August 1972, and a further increase of perhaps half as much seems likely by August 1974.

Dairy products.—Government policy with regard to support prices for manufacturing milk and to minimum prices for milk used as a drink will have considerable influence on the retail price index for dairy products. Production is rising in slow response to favorable milk-feed price ratios in recent years; but demand, usually static, is also increasing, partly because of especially strong demand for cheese as a meat substitute. If prices are not raised by government action, prospects are that producer prices will be stable or rise only slightly. Because of higher processing and distribution costs, however, the retail index of dairy prices may rise approximately 2 percent in 1973 and again in 1974.

Other foods.—Retail prices of sugars and sweets, beverages, and prepared foods are expected to reflect rising processing and distribution costs. Some suppressed inflation may now exist in these products as well as in cereal and bakery goods. Price increases of 2 to 4 percent annually for these foods taken together seem likely during the next two years. Fish prices may rise 5 percent in 1973 and 8 percent in 1974.

Food away from home.—A large element of service is contained in this food group. The index of prices of food consumed away from home typically has risen about 1.6 percent when the index of prices of food purchased in stores has risen 1.0 percent. The relationship is expected to continue.

All foods—summary.—Combining the foregoing estimates leads to the conclusion that the index of retail prices of all foods might rise 3.0 percent between August 1972 and August 1973 in the absence of controls and another 2.7 percent by August 1974. As indicated earlier, the estimates depend crucially upon certain assumptions, and the "all food" estimates could be wrong by 1 to 2 full percentage points even if the assumptions were borne out in later experience. The projected rate of increase in 1973 is about one percentage point less than actually occurred in the preceding year. (See Table 1.)

The principal significance of these projections is the probability that retail food prices will rise at a slightly slower rate than the rate of inflation assumed for the remainder of the economy in 1973 and 1974. That is to say, if nonfood items in the Consumer Price Index rose 3 or 4 percent per year without controls, retail food prices probably would rise a little less—3.0 and 2.7 percent. The slight damping effect is partly fortuitous (e.g., a cyclical downturn in pork prices) but is also traceable to the assumption that farm prices of feed grains and milk will be nearly stable under government programs.

Controls of Prices and Margins

Food prices cannot be stabilized if the circumstances that have inflated costs and incomes in the economy at large in the past 7 or

8 years persist in the future—neither demand-pull or cost-push causes of inflation can be permitted to get out of hand. There is, of course, the dilemma of how to maintain high-level employment and to provide for urgent social needs while holding prices steady in an economy characterized by substantial concentration of market power in important sectors of labor and industry. Broad economic policies to control inflation are beyond the scope of this paper. They are mentioned to avoid any implication that food price controls can succeed for long in an inflationary setting.

Price ceilings.—The workability of price ceilings for short periods of time varies from one food product to another. In general, foods like cereal and bakery products are more amenable to control in the form of price ceilings than are meats, eggs, or fresh fruits and vegetables. Normally a sufficient supply of raw materials for bakery products, prepared foods, etc., can be obtained to permit increases in demand to be met merely by producing more. If price ceilings are imposed at levels somewhat lower than prices otherwise would be, manufacturers and distributors will be likely to continue to meet demand for awhile even at a loss because they will still be more than covering their direct costs and will want to retain their customers. If losses do arise and are long continued, however, some firms will shut down, and a shortage will begin to appear. Then the control program will be in trouble. Temporarily, however, controls can work, and if they are not severe enough to cause many firms to lose money and if inflation does not drive costs up, the program can continue for an extended period. In these circumstances, of course, the controls have only a minor effect on prices.

The short-run situation is different for foods like meats. The quantity on the market is largely determined by farmers' earlier decisions about production. If ceilings reduce prices below the levels that would otherwise prevail, consumers will try to buy at least a little more than is available. A small, temporary shortage can be handled by stores' frequently being out of stock and by meat packers' taking care of their preferred customers first. But equity problems quickly arise: the consumer who cannot get to the store until late and the small retailer whom the packers can ignore are the ones on whom the shortage falls. Black markets are likely to emerge. Rationing becomes necessary to allocate supplies more equitably. The problem grows worse if ceilings prices in one year reduce production for a later year.

Thus problems likely to be deferred for a time in the case of foods like cereal and bakery products arise immediately for foods like meats and poultry when more than nominal price ceilings are imposed. Control policy subsequent to August 1971 has recognized this general distinction and has not called for ceilings on meats, fresh fruits and vegetables, etc. What has been said about foods like cereal and bakery products also applies to most consumer goods of industrial origin when excess plant capacity exists and unemployment is substantial.

Margin controls.—Regulations requiring processors and distributors not to raise their percentage margins at a time when farm food prices are rising often amount to no control at all, for the permitted increase in dollar-and-cent margins may well be greater than would be expected in the absence of any controls. Fixing maximum dollar-and-cent margins can create almost unmanageable problems for processors and

distributors when product varieties, brands, sizes, and qualities are numerous.

Food firms' response to margin controls is likely to be similar to their response to ceilings on cereal and bakery products. Retail prices are permitted under margin controls to rise to equate the amount demanded by consumers with the amount supplied. Even though numerous processor and distributors may suffer losses, they are likely to continue operation for a time. But if losses persist, some firms quit; and then reduced supply raises retail prices.

Much public discussion of margin controls for meats and poultry products has misrepresented their effect on consumer and farmer prices. In general, retail prices for, say, pork move to a level where the amount consumers choose to buy equals the amount on the market. The size of the price margin between farmers and consumers at that time affects the current farm price, not the retail price (with minor exceptions due to lack of precision in markets). If the level of the farm price influences the amount marketed by farmers a year or so later, retail prices will be affected then but not before.

Food retailers' net profits after taxes recently have averaged 1 percent or less of sales, and processors' profits are low in relation to sales for most foods for which margin controls usually are considered. (This does not necessarily mean that profits are low in relation to net worth.) It is impossible in such a situation for margin controls designed to leave some profit for sellers to have an important effect on the general level of food prices paid by consumers or received by farmers. It is true that retailers customarily "price the mix" and that margins are shifted around among products from time to time, with the result that the retail margin on an individual item—e.g., beef or cabbage—may change substantially from one month to the next. Effective margin control might help to stabilize markets for individual products but is unlikely to have a discernible effect on consumers' total food bills.

Market power and controls.—The most persuasive argument for peacetime price controls is that they are needed in sectors of the economy where market power of firms is sufficiently great for prices to be increased under circumstances when price-competitive markets would not support a price rise. Prices in such sectors may be little influenced by conventional fiscal and monetary restraints.

Most branches of the food industry other than farming are so structured that costs experienced in common by sellers—e.g., higher labor or container costs—are passed forward or backward rather quickly and thus soon affect prices and margins. In much of the food industry, however, market power does not commonly enable groups of sellers to establish arbitrary prices unrelated to costs and yielding clearly excessive profits. There are exceptions, classically illustrated by the breakfast cereals industry where monopoly-like pricing and profits have been demonstrated. In general, controls can have only a small effect on overall retail food prices by squeezing out excess profits. The main effect to be expected from controls in this context is increased resistance by management to increases in labor and other costs that in other circumstances would be passed on through price and margin adjustments.

Only rarely do farmers have any market power at their own disposal. Government farm programs, of course, do greatly influence prices of numerous foods. In a few instances, most notably in the sale of milk for

consumption in fresh form, farmers' bargaining associations have significant market power.

Other Policy Affecting Food Prices

Government farm programs.—The more important price support and production control programs affecting foods have already been mentioned. Programs for feed grains and wheat have had a stabilizing effect on prices for processed foods made from these commodities, and comparative stability of feed grain prices has been highly important in preventing more increase in prices of meat, poultry, and even dairy products than has occurred. Stocks of feed grains and land available for grain production are adequate for this situation to continue if that is the policy choice adopted and it is implemented by the Department of Agriculture.

In light of the rapid growth in demand for beef and the difficulty of producing enough cattle to go into feedlots to keep up with demand, a long-standing proposal regarding acreage control deserves renewed attention. It is to permit farmers to graze livestock on acres "set aside" or withdrawn from crop production under the control programs and to reduce payments for setting aside acreage when the grazing option is chosen.

The price support and marketing order programs for milk directly affect retail prices of the second most important group of foods. The amount of dairy products acquired by the Department of Agriculture to support prices is lower than in some past years and is declining, but surpluses are unlikely to disappear in the near future. For this reason and because of its relation to marketing order prices for fresh milk, the support level decided upon for manufacturing milk remain important.

Sugar prices are maintained above world trade levels, mainly by restricting imports. Peanuts and rice are other food products whose farm prices are regularly supported.

Inflation and events like the corn blight of 1970 and the huge wheat purchases by Russia in 1972 call for more explicit policies than so far developed regarding the stabilization aspects of farm programs. For most of their history, primary concern has been with price support, and large stocks and some degree of market stabilization have been by-products of price support. If it had been clear policy to hold prices near support levels by stock management and acreage variations where practicable, probably the run-up of grain prices in the early fall of 1972 would have been moderated.

Imports and exports.—Import barriers restrict entry of some foods into the United States, as is true of a wide range of industrial products. Beef and certain other meats were under quotas or "voluntary" limitations by foreign suppliers from 1964 to June 1972, when they were suspended for the remainder of the year. Beef imports rose immediately thereafter, but the added annual supply from abroad seems unlikely to exceed 2 percent of the total U.S. supply. The circumstances that make beef prices high in this country are to some extent duplicated elsewhere; no huge quantities of beef are ready to pour into the American market.

Imports of some fruits and vegetables are significantly restricted, at least at certain seasons of the year, by quotas and tariffs or by

provisions of marketing orders for the U.S. crops. Imports of dairy products are sharply restricted to make price supports workable. To attempt to support U.S. prices without limiting imports in effect would be an attempt to support dairy prices throughout the trading world. High sugar prices are maintained to support incomes of domestic producers, mainly by import quotas.

The United States is a large exporter of feed grains, wheat, soybeans and soybean products, certain fruits and vegetables, and rice. Though in principle domestic prices for these commodities could be reduced by restricting exports, in practice the possibilities are in some instances limited by price support commitments; and the adverse balance of payments at present means that agricultural exports are highly useful to the nation. Possibly some foods exported under P.L. 480 (Food for Peace) are not badly needed by countries receiving them under concessional terms and could be retained here; vegetables oils may provide examples.

Increasing efficiency.—More efficient farm production or processing and distribution methods are sometimes looked to as means of reducing inflationary tendencies. Some notable gains have been made, especially in a farm production, and some have had recent and observable influence on prices—e.g., the effect of control of Marek's disease in poultry on egg prices. But such developments usually come gradually and cannot be forced or relied upon. Food distribution from manufacturers' plants to store shelves contains some significant inefficiencies due in some instances to practices preferred by firms and in other instances to practices insisted upon by labor unions. In my opinion, much food advertising is wasteful and price-increasing, but the probability that anything will be done about it is low indeed. Rather than expecting that efficiencies of the conventional kind can have a more favorable effect on food prices than in the past, one should expect that measures to protect the environment and increase food safety will tend to raise food prices.

Conclusions

The supply-demand situation in foods does not suggest that the food sector will be an autonomous cause of inflation in the next two years. Inflation originating with circumstances outside of foods, however, can be expected to increase food prices. Price controls for several highly processed foods can be effective for a time in about the same limited way that controls can be effective for industrial products when excess capacity and unemployment exist. For meats, poultry products, and similar foods, however, more-than-nominal price ceilings probably require prompt recourse to rationing.

Squeezing excess profits out of food prices, even if accomplished, would have only a minor effect on consumers' total food bills. The principal accomplishment of price controls for foods in a cost-push setting might be to create greater resistance to increases in wage and other costs that otherwise could be passed on in prices. The net but not invariable effect of government farm programs in the past 8 years has been to stabilize prices, and the extent to which stabilization is coupled with farm income support in farm programs in the near future can have a significant effect on food prices at retail.

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Though practicable changes in import policy are not likely to have a large effect on food prices, continuing to suspend beef import quotas and perhaps removal of some other restraints can make a modest contribution to price stability. Bringing about prompt changes in efficiency in the food sector as a means of fighting inflation is not promising both because of the economic and technical nature of the problem and because of intense resistance sure to meet efforts to eliminate most identifiable inefficiencies.

There are no handy escapes in foods from the familiar dilemmas facing price stabilization in general. Can monetary and fiscal policies be noninflationary without too high a level of unemployment? Can cost-push forces be restrained by guidelines or selective price and wage controls? Special characteristics of the food industry modify the impact of general economic policies upon it but do not obviate the need for finding solutions to inflation mainly through such policies.

PRICE REDUCTION VIA PRODUCTIVITY SUPERGAINS: PRINCIPLES, PROSPECTS, AND PROGRAMS

By IRVING H. SIEGEL*

My assignment is to identify "potential areas of price reduction"—presumably, a subset of those industries characterized by better-than-average productivity gains. In addition to reporting here on a review of the recent productivity experience of numerous industries, I shall take some notice of correlative price changes. But I want to go beyond a statistical account since, even if it were rendered by a whole institute, it would still do less than full justice to the assignment. I feel required to say something also about the "theory" of productivity-warranted price cuts and about practical mechanisms for translating potentials into realities. The range of my discussion is indicated by the three nouns of the subtitle, which serve as divisional headings for the remainder of this paper.

PRINCIPLES

I discuss "theory" first. Under its own name and behind such masks as "profitability", "efficiency", and "technological progress", productivity has long been recognized by businessmen, by economists, and by administrators of planned societies to be relevant to price policy and behavior. I briefly comment on three patterns of relationship among productivity, wages (or incomes), and unit labor (or all-factor) cost that have been imagined or prescribed on behalf of downward price flexibility.[1]

Even before I describe the three patterns, I wish to insert three caveats which themselves belong in the "theory" of productivity-warranted price reduction. First, not one of the three patterns is automatically realizable through the operation of existing markets. Second, productivity change is not, and should not be reckoned as, the only valid determinant of price change. Third, insofar as productivity performance does indeed bear on opportunities for price reduction, productivity *prospects* are far more relevant than productivity *history* over the recent or longer past.

These caveats need not long detain us. With respect to the first one, monopolistic and oligopolistic forces—including the action of unions—probably tend toward achievement of rising, rather than stable or declining, prices in the economy at large. With respect to the second caution, price changes are properly influenced by numerous circum-

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[1] Reference is usually made to wages (per hour or per worker) in the rest of this paper, but only for convenience and not with the intent of ruling out a comprehensive incomes policy. If all income paid to persons and property is covered by a comprehensive policy, the conventional labor productivity concept has to be replaced by another that is equally comprehensive in scope. Similarly, it would no longer do to speak of unit labor cost; the proper concept becomes all-factor cost per unit of output.

stances in addition to productivity change and market imperfections. Among these many extra influences are capital needs, weather, custom, tastes, governmental regulations, and the intensity of foreign competition. The arithmetic of averages need not be satisfied, of course, by the behavior of each firm or industry included in a comprehensive measure. As for the third caveat, costs vary throughout the business cycle, so recent past experience regarding productivity and profits is not routinely extrapolable; and, taking a longer perspective, we should not expect a maturing, stagnating, or revitalizing firm or industry to recapitulate in the future its earlier record of productivity and cost changes. Inflation, unfortunately, seems not to care a fig for the opinion of economists and others regarding the braking power of productivity trends observed here or there in the economy over the past x or y years. Before the Kennedy-Johnson guideposts, the Eisenhower *Economic Reports* properly stressed the productivity outlook. I hope the reader bears this paragraph in mind as I try to simplify my presentation by the use of time-neutral language in my references below to productivity.

The first model envisages the distribution of all, or almost all, of the benefit of rising productivity in the form of price reduction. That is, hourly wages would *not* increase at all; but the purchasing power thereof would rise nevertheless as generally falling unit labor cost is generally translated into price cuts. This pattern for (say) private-sector averages permits deviations, of course; it is compatible with the registration of price rises for individual firms or industries that are characterized by productivity decline and advancing unit labor cost in a regime of typical wage stability.

In his final book *Competition as a Dynamic Process*, J. M. Clark recalled that this model, representing "hardly a thinkable condition", was advocated by such old stalwarts of The Brookings Institution as Moulton and Nourse. All people would benefit in their role as consumers; wages would not rise for workers, and prices would fall for nonworkers as well. "Inequalities in the diffusion", Clark observed, "would result only from the fact that products in which increased productivity has caused more than average decline in prices may play a larger part in some consumer budgets than in others".[2]

Although this model featuring vigorous price competition may not be realistic for the economy at large, innovative companies and industries do experience or anticipate substantial productivity gains and can use these gains as a partial basis for price reduction. Profit per unit could well decline, but a price cut itself may engender a compensatory gain in sales volume. Clark says:

> Sometimes the process may uncover possibilities of profitable sales expansion unanticipated by the more conservative members of the industry. This is most likely to happen when a young product is exploring new potential uses.[3]

Clark's remark can be extended to new *users*, too. It reminds me of Ford's example, which still has counterparts outside the automotive field, as we shall observe in the next section of this paper. The Model T first sold for $1,200, but later sold for as little as $295. Ford recognized a relation between price reduction and sales expansion; and he asserted that the reduction of price even served as a spur to cost-saving in design and manufacture:

[2] J. M. Clark, *Competition as a Dynamic Process*, The Brookings Institution, Washington, 1961, pp. 79, 441.
[3] *Ibid.*, p. 79.

When we first reduce the price to a point where, we think, more sales will result, then we go ahead and try to meet the price. The new price will force the cost down.[4]

The second wage-price-productivity model reflects a newer conventional wisdom which Galbraith himself tends to mistake for reality in *The New Industrial State*. This model, mentioned in the Eisenhower *Economic Reports* and more fully elucidated in the Kennedy-Johnson *Reports*, opts for general price stability with wages rising in step with productivity. Since differential wage adjustment appears impracticable from industry to industry, unit labor cost would not remain level everywhere; so price increases required in some industries would need to be offset by price reduction in industries with better-than-average productivity gains.

This is a model that is commonly favored for our society; it is not a mirror of what actually happens. Writing more than a decade ago, Clark opined that the aim of price stability with "equitable" wage adjustments would "not prove feasible". He foresaw wage gains generally outstripping productivity gains and prices consequently trending upward:

What we are likely to get, wages and prices being determined as they are, is a third form of diffusion, in which wages in the more dynamic industries rise as much or more than the better-than-average rate of increase of productivity in these industries, wages elsewhere follow this rate of rise as closely as they can, rising more than productivity in the less dynamic industries, average wages rise more than average productivity, raising average unit costs, and prices rise to offset this, approximately maintaining the proportionate share going to profits. The indicated result is a "creeping inflation", financed by an elastic credit system that is under pressure to furnish the monetary resources to handle the increased volume of business, on penalty of being held responsible for precipitating a recession. Fixed dollar incomes shrink in real value, real interest is less than nominal interest, and conventional depreciation reserves fail to provide funds for full physical replacement.[5]

Obviously, Clark's variant, which Sumner Slichter had visualized earlier,[6] is not a model that is amicable to price reduction. Besides, he regarded this variant as a mirror of reality. He noted the buoyant roles of unions and government in the passage cited; and, elsewhere in his book, he devoted considerable attention to company practices (such as product differentiation, "full-cost pricing", and the quest for "target returns" on investment) that also seem to limit the opportunity for price cuts.

Clark's pessimism remains warranted. Even during the present Phase II, a period of wage-price monitoring, we may encounter reports of the use of "price discipline", not for competitive price-cutting, but to enforce *rises*. Note the O. Henry twist and the complacent tone of this news item, which appeared in a prominent business publication at the beginning of 1972:

Demand for steel has started to pick up, and the Price Commission has given its blessing to price increases for sheet steel. So this would not seem a likely time to cut prices. But U.S. Steel Corp. did just that this week, with decreases of $5 to $25 per ton on more than half its products, including pipe, bars, structurals, and most sheet products. The reason: old-fashioned industry price discipline. Inland Steel Co. had quietly begun allowing quantity discounts of $1 to $8 a

[4] Quoted in Garet Garrett, *Henry Ford: The Wild Wheel*, Pantheon Books, New York, 1952, p. 108. See also pp. 12, 107, 109.

[5] Clark, *op. cit.*, p. 80.

[6] A succinct, advanced version of S. H. Slichter's argument may be found, for example, in his paper on "Labor Costs and Prices", *Wages, Prices, Profits, and Productivity*, American Assembly—Columbia University, New York, June 1959, pp. 167–180. In the same year (March 1959), Slichter testified before the Joint Economic Committee in the hearings on "The American Economy".

ton, and U.S. Steel apparently is aiming its lower prices at these, with the goal of forcing competitors up to the levels approved by the Price Commission.[7]

The third model that entails price cuts is algebraically close to the second one described above, and it acquired a prominent place in Soviet thought and practice long before wage-price-productivity controversy became a commonplace of our own economic scene. Instead of aiming at general price stability with wages rising in step with productivity, this rule seeks a more moderate wage advance and, *a fortiori*, declining unit labor cost. The object is to facilitate, not only price reduction, but also a shift of factor-input composition in the direction of capital. In an originally-classified monograph that I wrote two decades ago, I stated the Soviet concept and compared it to prevailing United States opinion in this manner:

> The ultimate dependence of high real wages on high labor productivity has, of course, been recognized by Soviet leaders from the very beginning. . . . Out of the struggle against leveling tendencies and the victory of planned investment, a conscious wage policy has evolved. This policy, often stated in garbled or elliptical form in Soviet and satellite literature, amounts to the following: The rate of productivity advance should exceed (1) the rate of increase of average *real* wages, so that a sufficient surplus should accrue to the state for capital expansion, defense, and educational services; and (2) the rate of increase of average *nominal* wages, so that unit labor cost would fall and money prices of commodities could also be reduced. If planning in terms of resources were perfect, the first relationship would be achievable without difficulty. If fiscal planning were correct, the second would be realizable, too. In U.S., where government "full" employment policy would have to be implemented by indirect means (like compensatory spending), there is more excuse for error.
>
> Incidentally, it is interesting to note that proponents of economic stabilization in the U.S. have generally recommended maintenance of a *static* price level over time and the increase of wages at the *same* average rate as productivity. Since the price level would be stable, however, real and nominal wages would be almost proportional (not exactly proportional because relative prices need not remain fixed). The difference between this wage policy and that of the USSR is the difference between the productionist and consumptionist philosophies.[8]

In concluding this section, I want simply to mention that the patterns of relationship here discussed can advantageously be recast in terms of aggregates. I do believe that a criterion stated in terms of output and payrolls is easier to grasp than an equivalent statement in terms of such averages as productivity, hourly pay, and unit labor cost.[9] When the next peacetime monitoring effort is required, a shift to aggregates should be considered.

Prospects

Turning to the available statistics, I take account below of two compilations reflecting the variety of productivity gains recorded in manufacturing in recent years. One set, showing the average annual trend rates of productivity change in 1958–1969, was promulgated by the Price Commission on May 3, 1972. The other set, showing annual productivity series and corresponding price movements for 1958–1970, was obtained from the Bureau of Labor Statistics for use in the preparation of this paper. In the remainder of this section, I refrain from

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[7] *Business Week*, January 8, 1972, p. 26.

[8] I. H. Siegel, *Soviet Labor Productivity*, Johns Hopkins Operations Research Office, Chevy Chase (Md.), May 1952, pp. 19–20. An accompanying footnote translates the discussion into algebraic form.

[9] See, for example, the four papers in I. H. Siegel, *Fuller Employment with Less Inflation*, W. E. Upjohn Institute for Employment Research, Kalamazoo, January 1969. The paper cited in footnote 18 is also relevant.

expressing and pursuing my usual interest in the quality of the data used and in the details of measurement.[10]

The Price Commission needs productivity rates for guiding the calculation of approximate change in a company's unit labor cost, but the language still used in the monitoring instructions could easily confuse the earnest businessman or his professional consultant.[11] The Commission's reliance on trend rates implies that they are interpretable as near-term forecasts. It does appear that, in their derivation, an effort was made to give them greater relevance to the economic prospect.[12] Nevertheless, it remains reasonable to entertain reservations concerning the equivalence of computed rates for a past decade or so and unknown preferred rates for the year or two immediately ahead.

If the reservations are themselves unwarranted, the Commission's productivity figures do disclose industries that might merit further examination for price-cutting potentials. The weighted average of the hundreds of published annual trend rates is between 3 and 4 percent.[13] Taking 5 percent or more as the criterion of better-than-average productivity gain, we may isolate many candidates for closer study. Since wage adjustments tend to be more uniform than productivity change from industry to industry, better-than-average productivity rises will often signal the decline of unit labor cost.[14] Such a decline affords an opportunity for, but hardly guarantees, price reduction.

Falling below the adopted productivity standard of 5 percent per year are many familiar targets of complaint by the antitruster and the consumer. Thus, on productivity grounds alone, the prospects of price reduction would appear unpromising for, say, contract construction as a whole, iron and steel (3312), automobiles (3711), machine tools (3541, 3542), primary aluminum (3334), and bread and cake (2051).[15] Whoever balks at the inclusion of automobiles here, however, might be tempted to lower the productivity criterion; this industry's trend rate, 4.1 percent, is *above* the weighted average for the Price Commission's list.

Rates above 5 percent per year for the period 1958–69 are shown for many industries (some of them sizable) in that list. Thus, a gross screening according to the 5-percent standard would suggest that closer scrutiny for price-cutting potentials is warranted in these cases and some others: coal mining (anthracite and bituminous), flour milling (2041), rice milling (2044), brewing (2082), distilled liquors (2085), soybean oil (2092), women's hosiery (2251), tufted carpets and rugs (2272), tire cord and fabric (2296), veneer and plywood (2432), business forms (2761), industrial gases (2813), cyclic intermediates and crudes (2815), industrial organic chemicals (2818), plastics materials and resins (2821), cellulosic man-made fibers (2823), medicinals and

[10] These are discussed in Roger Bezdek's paper, "Conceptual and Empirical Problems in the Measurement of Prices and Productivity," above.

[11] If a second-order term is ignored, the percentage change in unit labor cost is approximated by the difference between the percentage change in hourly wages and the percentage change in productivity. This truism is stated like a policy decision, and obscurely besides, in, for example, *How to Compute Productivity Gains*, Internal Revenue Service Pub. S–3020, revised to June 1972. The title is misleading; the pamphlet focuses mainly on the computation of change in unit labor costs and gives the unfortunate impression that all increases in such costs are "allowable".

[12] "A New Productivity Yardstick", *Business Week*, May 13, 1972, p. 122.

[13] According to the source cited in footnote 12, the 433 industry rates, weighted by sales, average 3.3 percent; and the manufacturing rates average 3.6 percent.

[14] Of course, declining unit labor cost can more easily be ascertained by comparing changes in payrolls and output—a point made at the end of the preceding section.

[15] The numbers in parentheses refer to the Standard Industrial Classification system of 1967. They identify more clearly the industries to which I often give only informal names.

botanicals (2833), pharmaceutical preparations (2834), fertilizers (2871), agricultural chemicals (2879), adhesives and gelatin (2891), carbon black (2895), petroleum refining (2911), miscellaneous plastics products (3079), transformers (3612), household refrigerators and freezers (3632), household vacuum cleaners (3635), radio and television receivers (3651), picture tubes (3672), semiconductors (3674), and motorcycles and bicycles (3751).

From the annual productivity series supplied by the Bureau of Labor Statistics for 1958–1970 (printouts dated July 19, 1972), a very similar catalogue is derivable. One inconsistency, however, stands out—for synthetic rubber (2822). Here, the Commission trend rate is only 2.7 percent, or below average. In contrast, the BLS printouts show that output per employee man-hour increased by about two-fifths in all manufacturing during the span of a dozen years but doubled in the synthetic rubber industry.

A perusal of the accompanying price series supplied by BLS makes it clear that significant declines have indeed occurred in many instances with the support of productivity supergains. In the case of synthetic rubber, the price decline was only slight (1.5 percent) between 1958 and 1970. In some other instances in which productivity doubled, however, the price cut was striking—e.g., plastics materials (30 percent), industrial organic chemicals (18 percent), cyclic intermediates (20 percent), medicinals and botanicals (25 percent), carbon black (12 percent), electrometallurgical products (3313, 23 percent), air-conditioning and refrigerating equipment (3585, 9 percent), radio and television receivers (22 percent), tufted carpets and rugs (21 percent), knit fabric mills (2256, 25 percent), and linoleum (3996, 8 percent). For picture tubes, which experienced nearly a trebling of productivity, the price cut was 46 percent between 1958 and 1970.

Even in the generally inflationary years since 1967 productivity supergains have permitted various industries to realize—or endure—price cuts. The BLS printouts show productivity and price advances of 6 and 8 percent, respectively, for all manufacturing in 1967–1970. Against this backdrop, they reveal a much sharper productivity rise, 29 percent, for plastics materials, accompanied by a price decrease of 14 percent. A productivity increase of nearly 15 percent is indicated for synthetic organic fibers (2824), which experienced a further price decline of 2 percent in 1967–1970.

Outside of chemicals, similar combinations are also to be found. In the textiles group, for example, knitted fabric mills gained nearly 12 percent in output per employee man-hour during 1967–1970 while prices fell 7 percent; tufted carpets and rugs posted an increase of 13 percent in productivity as prices receded another 2 percent. For radio and television receivers, a smart gain of 26 percent in productivity was bracketed with a fall of more than 6 percent in prices. A more striking productivity rise for miscellaneous plastics products (3079), 35 percent, was linked to a price retreat of 15 percent. Additional examples, such as picture tubes and optical equipment and lenses (3831), may be cited, as productivity supergains merely supported virtually *stable* prices in still other industries—e.g., in the chemical and textile areas, photographic equipment and supplies (3861), writing pens (3951), and linoleum.

The above report of good correlations between productivity and price changes could, of course, be supplemented by a chronicle of

contrary instances. Unremarkable productivity gains have occasionally occurred together with favorable price performance, and better-than-average productivity experience did not always entail either price stability or price decline.

Without a closer analysis of circumstances, previous productivity and price experience provides no sure clue to areas now ripe for price-cutting. Good past records may not be sustainable—in the face, say, of unusual new wage settlements or intensifying foreign competition. Furthermore, poor past productivity-price records should not suggest unimprovability and should not discourage corrective action by, say, managements acting alone or in concert with union leadership or with government. In the motor vehicle group (3710), for example, the productivity performance in 1958–1970 was no better than for all manufacturing; and it was altogether stagnant in 1967–1970, as corresponding prices rose more rapidly than for all manufactures. Should this sort of record in so important an area be accepted with complacency? The same challenge is raised by the BLS statistics for our vaunted iron and steel industry (3312). There, only trivial productivity gains were achieved in 1958–1970, and a drop of 3 percent was indicated for 1967–1970—as the price rise exceeded the percentage increase for all manufactures.

Programs

Since a favorable productivity basis for price reduction cannot routinely be achieved and sustained, and since other circumstances often militate against such reduction anyway, some continuing systemic or institutional correctives may be needed. Without these remedies, achievement and maintenance of average price stability may be out of the question as our nation also pursues the goal of reasonably full peacetime employment. The experience of price cuts cited in the preceding section should encourage a quest for ways to improve the nation's performance in this regard. It is not compulsory to accept the counsel of despair that so respectable an economist as Sumner Slichter was dispensing by the end of the Eisenhower period:

> One fact that stands out conspicuously . . . is that ours is a producer-dominated economy—the consumer is the forgotten man. We have the institutional arrangements that make gains in productivity produce higher wages and higher prices, but no one even speculates about the possibility of altering our institutions so that gains in productivity will produce lower prices. The absence of concern for the consumer is understandable because the consumer does not demand lower prices.[16]

In commenting on systemic correctives, I feel no need to repeat the familiar tax (and other) incentives for upgrading technology and for transforming it into ready physical plant and equipment. I wish instead here to mention again a proposal I have made for reinforcing the guidelines for noninflationary wage behavior: Workers should be encouraged to forego demands for supraproductivity pay gains by the offer of purchasing-power protection for infraproductivity pay increases. My elaborations of this idea for self-enforcement have allowed roles for wage-deferment bonds and for tax write-offs.[17] For symmetry, tax benefits could also be offered to companies that voluntarily share their productivity gains with the public in the form of lower prices.

[16] *Loc. cit.*, p. 180.
[17] See *Fuller Employment with Less Inflation* (footnote 9).

In speaking of institutional correctives, I like to assume that comprehensive controls will be avoided a bit longer as our mixed economy continues to evolve along various lines into a monitored economy. Even if there is a Phase III that, say, confines wage-price monitoring to the private economic heavyweights, I look toward a Phase-Out also. This is not to say that another episode of peacetime wage-price surveillance will prove unnecessary; indeed, in another paper, I have predicted a "third-generation" peacetime effort (i.e., a successor to Phase II–III and to Kennedy-Johnson jawboning), but I did not set a date.[18] In the meantime, as government programs proliferate for meeting the challenges of foreign competition at home and abroad, I assume that a certain amount of wage-price monitoring will become absorbed into the criteria for public assistance to private entities or for closer public-private "partnership" (e.g., in foreign trade).

A happy recent development suggests that government may acquire a new instrument for facilitating price reduction. This instrument is at once more subtle and more pervasively applicable than, say, the antitrust suit or the subsidized "rollback" of selected prices. I refer to the sudden harvest of instances of both "voluntary" and "ordered" price-cuts required for compliance with the Price Commission's profit-margin limitations. The increasing frequency of news reports concerning price reductions to base levels and further reductions that cancel excess revenues generated by higher markups means that more businessmen, government officials, and citizens are becoming aware of the longer-term potentials provided by Phase II regulations.

I have recently rediscovered two institutional proposals offered by the late Walter Reuther for price stabilization. Today, these proposals, for a Price-Wage Review Board and a Consumer Counsel, sound much less stringent than they did when presented at the Upjohn Institute's anniversary conference of 1966. I quote in full the relevant passage in Reuther's address:

> We in the UAW have long advocated the establishment of a Price-Wage Board of Review. This Board would have authority to make public investigation of situations in which major corporations, powerful enough to dominate key industries, propose questionable price increases or are believed to be maintaining prices at unjustifiable levels. Situations warranting investigation would include those in which dominant corporations attribute their proposed price increases to the collective-bargaining demands of their workers.
>
> Corporations in this dominant position—say, those which control 25 percent or more of a key industry's sales—would have to give notice to the Price-Wage Review Board of any intended price increase. The Board would then have power, before the increase could go into effect, to call corporation officials before it for a public hearing. At such a hearing, the Board would demand from the company all the pertinent facts; and, following the hearing, it would publish its findings and recommendations and the facts supporting them.
>
> If a corporation subject to such review alleges that meeting the demands of a union would force an increase in prices, then the union would be put into the public goldfish bowl along with the corporation. Both parties would be required to appear at the hearings.
>
> To deal with the situation where a corporation may already be charging extortionately high prices, we propose also the provision of a Consumer Counsel. He could initiate hearings when he has reason to believe that a corporation's prices are too high. He would also represent the consumer interest at all Board hearings.
>
> The Board would have no power to prohibit a price increase or to require a price cut. Its function would be limited to getting the facts and making them available to the public. If the public were informed, however, with facts and

[18] I. H. Siegel, "Productivity Statistics for a Third-Generation Wage Price Monitoring Program", a paper presented at the 1972 meeting of the American Statistical Association and published in abbreviated form in *Congressional Record*, October 16, 1972. E8787–E8789.

figures making clear that a proposed price increase, or that a union's wage demand, is not justified, it is highly doubtful that the corporation or the union would persist. In a free society, informed public opinion has persuasive force. It has great power to discipline private, voluntary decisions that affect the public interest and to make them socially more responsible.[19]

To conclude this section and my paper, I refer to S. 3970, which nearly achieved enactment in the 92nd Congress and could be adapted or interpreted to accommodate suggestions such as Reuther's. It provides for a Council of Consumer Advisers in the Executive Office and an independent Consumer Protection Agency. According to Section 203, the Administrator of the Agency "may as of right intervene as a party" to represent consumers in proceedings before any other Federal agency. Presumably, he could represent the consumer viewpoint in wage-price hearings as a "party at interest", functioning in effect as Reuther's Consumer Counsel. Productivity and unit labor cost would surely have a critical place in the briefs presented for price restraint or price reduction.[20]

[19] From Walter P. Reuther's paper in I. H. Siegel, ed., *Manpower Tomorrow: Prospects and Priorities*, Augustus M. Kelley, New York, 1967, pp. 34–36.

[20] The opinion of a Consumer Counsel or a Consumer Protection Agency Administrator would, of course, carry greater weight if it could be backed by a plausible threat to invoke government's market power as a large purchaser, as a "monopsonist."

PRICE CONTROLS AND INCOME REDISTRIBUTION IN AN EXPANDING ECONOMY

By ROBERT H. HAVEMAN *and* THAD W. MIRER [1]

A price control system, either voluntary or mandatory, appears to be widely accepted as a necessary though troublesome instrument to restrain inflationary pressures once set into motion. Because such pressures are not likely to subside if, as is likely, monetary-fiscal measures are undertaken to increase rates of capital and labor utilization, some system of price controls will likely be maintained into the mid-1970's.[2] In addition to their role in curbing unrestrained rates of wage and price increases, price controls both alter the allocation of the nation's resources and shift the distribution of income.[3] While the effect of price controls on the income distribution is typically thought of in functional terms—namely, the distribution of income between wages and profits—controls are also an important determinent of the size distribution of income. In this paper, we will analyze the effect of price controls on the poor, middle income groups, and the rich, and explore the feasibility of utilizing a system of price controls as an instrument in managing the income distribution. The effect of price controls on the efficiency of the nation's economy will be considered only briefly.

At the outset, we should make clear our personal judgments concerning the issues of inflation, price controls, and the distribution of income. First, we do not believe that the real welfare effects of a continuing inflation of moderate proportions are especially serious. A number of recent studies have shown the distributional impact of inflation to be rather small.[4] Moreover, we judge that it would be relatively easy to establish mechanisms to protect those with fixed incomes against the adverse effect of inflation.[5] Further, the real output effects caused by the uncertainties of a changing price level seem small. However, we do recognize the great social and political distaste for inflation. Second, like most economists we are skeptical about the overall desirability of price controls. We view even imperfect markets as relatively efficient allocators of the economy's resources, and dislike

[1] The research reported here was supported by funds granted to the Institute for Research on Poverty at the University of Wisconsin at Madison pursuant to the provisions of The Economic Opportunity Act of 1964. Robert Haveman is the Director of the Institute and Professor of Economics, and Thad Mirer is a Research Associate of the Institute and Visiting Assistant Professor of Economics. The authors retain responsibility for all views herein.

[2] See Otto Eckstein and Roger Brinner, "The Inflation Process in the United States," U.S. Congress, Joint Economic Committee, 1972, p. 44.

[3] In our paper, "price controls" and "price control systems" are used in their economic sense as an effort to alter the normal price-setting function of the market system. Because markets determine the price of commodities, the price of labor services (i.e., wages) and the price of capital services (i.e., profits), we discuss controls which have influence over all of these prices.

[4] See, for example, Robinson G. Hollister and John L. Palmer, "The Impact of Inflation on the Poor," Institute for Research on Poverty Discussion Paper No. 40-69; and Edward C. Budd and David F. Seiders, "The Impact of Inflation on the Distribtuion of Income and Wealth," *American Economic Review*, LXI (May, 1971).

[5] See James Tobin and Leonard Ross, "Living with Inflation," *New York Review of Books*, XVI (May 6, 1971).

the inevitable inefficiencies which would stem from administratively set prices. Also, we are concerned with the enormity of the administrative task and the opportunity it affords for the making of arbitrary, uneconomic, and highly centralized price decisions. Third, we feel that the current income distribution is too unequal and that it is the proper function of government to improve this situation. While being especially concerned with raising the lower tail of the distribution—the poor—we would not object to a simultaneous lowering of the upper tail of the distribution.

Because of recent experience in managing the economy and the continuing pressure for attaining true full employment (an unemployment rate of 2 to 3 percent), it seems likely that the U.S. economy will be encumbered with some system of price controls into the foreseeable future. These controls can be expected to have considerable impact on both the economy and on the distribution of income. Without advocating such control systems, we shall analyze their efficiency and equity impacts with special concern for their effect on the distribution of income. Recognizing that not everyone will agree with establishing income redistribution as a secondary target for price controls, we will nevertheless view a system of price controls as a potential instrument for the redistribution of income.[6]

I. The Choice of Macroeconomic Policy: Considerations of Efficiency and Equity

We have suggested that any policy designed to achieve true full employment will be accompanied by some price control system in order to avoid a politically unacceptable level of inflation. If this is so, a question of a distinctly economic sort is posed: What is the right combination of unemployment, inflation, and price controls? Clearly, this question cannot be answered definitively. Recent experience has demonstrated that there is no fixed relation between the level of unemployment and the rate of inflation; the way unemployment is reduced, for example, influences the rate at which the price level will rise. Nor is there likely to be a precise relationship between the nature of the price control system and the rate of inflation. Nevertheless, these three elements of the macroeconomic situation are related to each other, and trade-offs exists among them. We will, in this section, summarize the efficiency and equity aspects of changes in unemployment, inflation, and price controls.

Unemployment

It almost goes without saying that a decrease in unemployment increases the efficiency of the economy. Indeed, the very existence of unemployed labor and capital indicates a waste of resources which could have been used to produce goods and services of value to people. For example, in 1971, about 1.4 million workers were unemployed relative to the economy's official potential—indicating a loss in output of $70 billion. That entire amount is economic waste.

[6] Herbert Stein (Chairman of the Council of Economic Advisors) has remarked before Congress that "the price and wage control system was not established to make a radical change in the distribution of income in the United States . . . this program has plenty of problems without that one." (Hearings before the Joint Economic Committee, April 14, 1972.) On the other hand, as will be noted below, it seems to have been the intent of Congress to make some aspects of the current control system positively redistributive in nature.

It is not so obvious, however, that a decrease in unemployment also leads to a decrease in the inequality of the income distribution. The direct gains from new employment will be concentrated in the relatively low skill, low wage occupations, thereby decreasing income inequality; on the other hand, profits also will tend to rise as unemployment decreases, thereby increasing income inequality. However, despite the offsetting effect of profits, decreasing unemployment appears, on balance, to be an effective instrument to achieve a more equitable income distribution. Indeed, it has been claimed with justification that the most effective anti-poverty instrument is the achieving of full employment.[7]

Inflation

The effect of inflation on the economy's efficiency is difficult to discern with any confidence. Whatever the direction of the net effect, its size appears to be small. While a fluctuating price level may inhibit careful investment planning, thereby reducing growth and efficiency of the economy, expectations of steady inflation may generate a higher rate of investment than otherwise would occur. More importantly, perhaps, inflation can lead to an increase in efficiency of resource allocation if there are structural rigidities in wage or price movements. For example, if wages and prices are inflexible downwards, only during a period of inflation can the shifts in relative prices toward those required for allocative efficiency be accomplished.

The effect of inflation on the distribution of income seems even less clear. While increases in the consumer price level have often been viewed as falling more heavily on low income families, this result seems neither general nor inevitable.[8] However, serious disparities in the rates of increase between wages and profits could lead to adverse equity effects. Because the Nation's wage bill is more heavily concentrated among lower- and middle-income people than are profits, a higher rate of increase in the latter could lead to greater inequality in the distribution of total income.

Price Controls

The effect of price controls on national economic efficiency is not so ambiguous. Economic theory suggests that the relative prices yielded in a competitive market system are the most efficient ones, and that discretionary interference in the market process will induce resource misallocation and losses in economic welfare. In our view, a system of general controls is likely to lead to decreased efficiency even in the real world of imperfect markets, spillover effects, and other government policies. Such real economic costs of any system of controls cannot be neglected.

Of necessity, a system of price controls will have equity effects of some sort. Discretionary manipulation of wage and profit rates is the very essence of such a system. It is impossible to state *ex ante* whether such control systems will induce greater or lesser degrees of income

[7] See Hyman Minsky, "The Role of Employment Policy," in Margaret S. Gordon, ed., *Poverty in America* (San Francisco: Chandler, 1965), and "Poverty: The Aggregate Demand Solution and Other Non-Welfare Approaches," Report MR-41, Institute of Government and Public Affairs, University of California, Los Angeles.

[8] See Hollister and Palmer, *op. cit.*

inequality—it all depends on the decisions which are made. That a price control system can be used as an instrument to attain some increase in the equality of income distribution is not to be doubted, however.

While decisions made within any system of controls can lead to a change in the distribution of incomes, it should be emphasized that few control decisions can have a substantial effect on the real income level of the poverty population. A large proportion of such families have little or no income from labor or property; in 1970, only 55 percent of the total income of the poor came from these sources. Moreover, although the poor tend to concentrate their expenditures on different commodities or services than other groups, the difficulty of altering specific commodity prices for this purpose—together with the low target efficiency of such price changes—suggests the ineffectiveness of such a strategy.

II. The Economics of Expansion

In our subsequent discussion we will assume that the efficiency and equity costs and benefits of alternative macroeconomic policy strategies have been weighed and that a decision has been made to pursue a full employment policy aimed at ultimately driving the unemployment rate down to 2 to 3 percent and to accompany this policy with a system of price controls. Before inquiring as to how such a system could be used to affect the size distribution of income and to reduce income poverty, we first consider what would be the expected impact of such an expansion *in the absence of price controls*. From both theory and the historical record, we have some confidence in predictions about change in the economy as recovery from high levels of unemployment to a "normal" unemployment level of 3.5 to 4 percent occurs. However, for an expansion toward 2 to 3 percent unemployment our conjectures must be more uncertain.

In the first phase of expansion, increased production will lead to increased demand for labor services. Employment gains will be concentrated in the relatively low skill, low wage occupations because it is these categories of labor which are the most variable inputs in the production process. This differential nature of the increase in labor demand should be reflected in differential changes in wage rates: wage rates of low skill, low wage labor will increase faster than those for higher skill, higher wage labor. Early in the expansion, corporate profits may be expected to increase, because of productivity gains attributable to high skill workers who were underutilized, but not laid off, in the recession.[9]

In the second phase of an expansion designed to yield an unemployment rate of 2 to 3 percent, unprecedented peace-time economic activity would be occurring. As the economy pushes beyond "normal"

[9] On the general distributional effects of expansion, see Thad W. Mirer, "The Effects of Macroeconomic Fluctuations on the Distribution of Income," Institute for Research on Poverty Discussion Paper No. 110–72; on the changes in relative wages, see Melvin W. Reder, "Wage Differentials: Theory and Measurement," in *Aspects of Labor Economics* (New York: National Bureau of Economic Research, 1962). In 1970, the first phase of the recession, employment losses were not so concentrated in the low skilled occupations as they were in past downturns; see Thad W. Mirer, "The Distributional Impact of the 1970 Recession," Institute for Research on Poverty Discussion Paper No. 136–72. However, the structure of unemployment probably became more typical in 1971, and the unemployment of some high skill workers may now be viewed as "structural" rather than "cyclical." On the whole, the historical patterns appear to provide the best qualitative prediction of what may be expected in the recovery.

peak operating capacity, overhead factors including high skill and managerial labor will become relatively scarce, and their wages will increase faster than before. The probable net change in relative wages (without controls) is hard to predict; it depends on the underlying characteristics of demand increases and the flexibility of production processes.

The pattern of consumer commodity price increases during the expansion is also difficult to predict. However, because of likely shifts in demand the prices of nonnecessities would be expected to rise faster than those of basic consumer commodities.

It is important to realize that in an expansion unfettered by a price control system, the distribution of money income will be changing as a result of differential increases in wage rates, profits, and the utilization of productive factors. These differential increases in factor prices may be considered the natural rates of increase in the expansion, and the resulting distribution of income as the natural one. Any redistributional or reallocative effects of a price control system must be measured relative to this natural outcome—and not relative to any historical distribution. Comparisons to historical distributions of income, although interesting, would not measure the effects of a price control system.

With or without price controls, the exact macroeconomic expansion path will depend on the nature of the fiscal-monetary policy used to stimulate the economy. Considering government expenditure policy, especially in the second phase of the expansion, targeting expenditures so as to create jobs for low skill workers would generate more income for low income families (at least in the short run) than would a general increase in expenditures, and would generate less inflationary pressure.[10] Moreover, such selective expenditures may well be more efficient than a general increase in government spending, even if the real benefits per dollar of such selective expenditures are less than for the general increase in spending. This is due to the fact that the real social costs of employing otherwise unemployed resources are less than the nominal costs and may, in fact, be zero.[11]

III. Price Controls as an Instrument for Income Redistribution

Given a strongly expansionist strategy aimed at achieving an unemployment rate of 2 to 3 percent, the effects of the accompanying system of price controls on the size distribution of income cannot be neglected. While one can conceive of a neutral price control policy—one that would achieve the same relative income distribution with controls as without—it would be suboptimal to design such a program if managing the income distribution toward greater equality is a national policy goal. Moreover, it should be emphasized that the social and political resistance to income redistribution is lower when total income is growing than when it is constant. As a consequence, it seems reasonable to analyze the desirability of using a system of price controls to achieve greater equality in the income distribution during such an expansionary period.

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[10] Such a targeting policy is discussed by William Fellner, "Aiming For a Sustainable Second Best During the Recovery From the 1970 Recession," American Enterprise Institute, Special Analysis No. 20, 1971.

[11] For an analysis of the real costs of alternative public expenditures in a period of less than full employment, see Robert H. Haveman and John V. Krutilla, *Unemployment, Excess Capacity and the Evaluation of Public Expenditures* (Baltimore: Johns Hopkins Press, 1969).

Any comprehensive system of price controls will be required to manage changes in all of the primary elements of the price system: profits, commodity prices, and wages. Because of the interdependence of these prices, management of any one of them affects the others; none can be left alone. In this section we will analyze the possible redistributive aspects of profit, price, and wage controls and briefly examine their general equilibrium impact.

First, consider the management of *profits*, or, more technically, the price of capital services. A comprehensive system would limit the rate of growth of profits for firms, but would allow differences in the rates of return among firms and industries to be maintained. Such differentials are essential because of existing productivity differentials of current capital in alternative uses.[12]

If the control system is to achieve a less unequal distribution of income, profits should be constrained so as to decrease the ratio of profit income to wage income below what it otherwise would be. The income distribution would be made less unequal because the receipt of profit income is concentrated among persons of high total income, while labor income is more equally distributed. However, this redistribution would not lead to more than a negligible increase of income for persons now classified in the poverty population.[13]

Some distribution of real income could also be achieved through the regulation of *commodity prices*. Since commodities are consumed in different proportions by persons of different income levels, a control system might seek to identify these consumption patterns and regulate the increases of various commodity prices (relative to their natural rates of increase) in a progressive manner. For example, the prices of basic commodities which absorb a high proportion of the expenditures of the poor (such as food and housing) might be restricted to a very low or zero rate of increase while luxury and related commodities might be allowed to increase at their natural rates.

While such differential patterns of commodity price controls are possible, their implementation would appear to be exceedingly difficult. Anything more than a policy of crude differentials based on some distinction between luxuries and necessities would require the calculation of rates of natural increase for a wide variety of commodities and a set of price regulations permitting increases equal to varying proportions of the natural rates. In addition to such a system being an enormously complex one to administer, it would entail serious profit restrictions on producers of basic commodities, encourage black markets for such goods, and generate reductions in supply and increasing serious pressures for price increases on such commodities over time.

In this connection, it should be noted that price control mechanisms could, if desired, be used to remedy the effects of market imperfections on price and resource allocation in certain markets.

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[12] While control over profits could be achieved through a system of profits taxes (rather than by forcing output price reductions), this would not eliminate the adverse effect of profits themselves on the commodity price level.

[13] We calculated the distributional impact of decreasing profit incomes by 20 percent and transfering this money to recipients of wage and salary income, assuming that the decrements to profit incomes and increments to wage and salary income were distributed as are total profit and wage and salary income. Using family income data for 1969, the share of total family income received by the poor (who number 10.5 percent of all persons in families) increased only from 1.963 percent to 1.964 percent—a result which is insignificant in comparison to possible rounding error in the data. Source: U.S. Bureau of the Census, *Current Population Reports*, Series P-60 ("Consumer Income"), No. 76, Table G.

For example, housing and agricultural markets as well as those dominated by oligopolistic market structures (e.g., steel, autos, oil) are grossly imperfect because of supply restrictions and subsidy arrangements. Observed market prices do not encourage an efficient allocation of resources toward and within these industries. In an expanding economy, any system of direct controls could be used to bring prices in such markets closer to long-run marginal costs with relatively small dislocations. Such an objective may be equivalent to that of reducing the ratio of profits to wages in some markets dominated by firms with control over prices.

In our judgment, if price controls are to be used to reduce the inequality of the income distribution, primary attention must be concentrated on the system of *wage controls*. Because the bulk of total income is wage income, alteration of the distribution of wages can have substantial effect on the distribution of total income. Managing the distribution of wages, then, would appear to be fully as important in achieving a less unequal distribution of income as reducing the ratio of profits to wages in the economy.[14]

Phase II of the current system of controls incorporates one crude means of regulating wage rate increases to equalize the distribution of income. The Economic Stabilization Act, which created the authority for a price controls system, states that:

> * * * wage increases to any individual whose earnings are substandard or who is a member of the working poor shall not be limited in any manner, until such time as his earnings are no longer substandard or he is no longer a member of the working poor.

The Cost of Living Council, undoubtedly more concerned with reducing the rate of inflation than with the secondary goal of making the poor and the near poor relatively better off, defined the poverty wage level as $1.90 per hour and exempted wage rates below this level from control. In response to Congressional and public concern, and a court decision, the poverty wage was later raised to $2.75.

A neutral wage control policy would be one which led to the same relative distribution of wage income under the control system as would have been achieved by the economy in the absence of controls, with all other policies remaining the same. For example, in Figure 1, the dotted line illustrates the proportional rate of increase in wages which would occur during an expansion in the absence of controls. In the previous section we referred to these as the "natural" rates of wage increase. If, as is likely, the aggregate rate of growth of wage rates is excessive, a ceiling on this overall rate of wage increase is required. A neutral set of wage rate growth ceilings are illustrated by the dashed line in Figure 1.

The criterion for a set of ceiling rates to be neutral is that the relative distribution of wage income achieved under the control system be the same as that which would have been achieved in the absence of such a system. Technically, the criterion is that the ceiling gross rate of increase (gross rate=1+net rate) be the same propor-

[14] It should be noted, however, that a differential pattern of wage controls is not likely to lead to any substantial reduction in poverty. The contribution of wages and salaries to the total income of poor families amounts to less than 50 percent.

tion of the natural gross rate of increase for all wage rates.[15] Given this criterion, it is clear that if the natural rates of wage increase in an expansion are those which we have predicted (and illustrated in Figure 1 as the downward sloping dotted line), then a control policy which limited all wages to grow at the same rate would be regressive: it would restrict the natural growth of low wages relative to high wages and result in a less equal relative distribution of wage income.

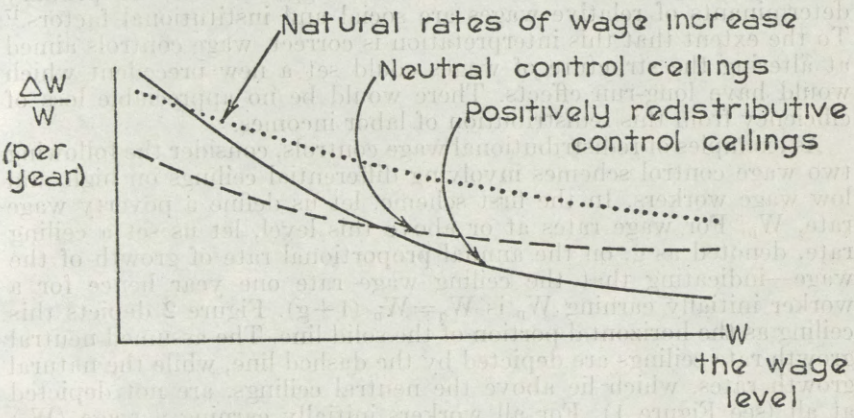

FIGURE 1.—Natural rates of wage increase and associated control ceilings.

Once the neutral ceiling rates of increase are determined, the criterion for a wage control policy to be positively redistributive is a simple one: the ceiling rate for increases in low wage rates must be above the corresponding neutral ceiling rates, while the ceiling rate for increases in high wage rates must be below the neutral ceiling rates. In the simplest case, if the netural ceiling rates of increase were equal for all wage rates, then the redistribution criterion is equivalent to requiring the ceiling rates of increase to be inversely related to the wage level. If the pattern of neutral ceiling rates of increase are more complex, as we have suggested, then application of the criterion is also more complex. An example of one positively redistributive pattern of wage controls is illustrated by the solid line in Figure 1.[16]

The mechanism which would bring this redistribution about is simple to describe. Firms will be constrained to increase high wages at rates no greater than the control ceilings, which lie *below* the neutral ceilings; meanwhile, they will want to raise low wages at rates at least as great as the natural rates, and will be able (under the ceilings) to raise them *above* the neutral ceiling rates.

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[15] For any initial wage level w^0_i, let g_i be the net natural proportional growth rate and G_i be the corresponding gross natural rate ($G_i=1+g_i$); let c_i be the ceiling net growth rate, and C_i the corresponding gross ceiling rate. After one period of increases, each wage level would have grown to $w_{ii}=w^0_i\cdot(G_i)$ in the natural state and will grow to $w^2_i=w^0_i\cdot(C_i)$ under controls. If $C_i=x\cdot G_i$, where x is the same for all wage levels and is determined by the control authorities, then the relative distribution of wages will be the same in the natural and the control states; the control will be neutral. In terms of the net growth rates, $(1+c_i)=x\cdot(1+g_i)$, or $c_i=x\cdot g_i-(1-x)$.

[16] These redistributive ceilings, if achieved by all wage earners, would lead to a more equal relative distribution of wage income than would occur if no ceilings at all were imposed. It should be noted, however that the relative distribution of wage income obtained by redistributive ceilings need not be more equally distributed than wage income before the beginning of the expansion or in any other historical reference period.

It should be emphasized that in addition to the redistribution of labor incomes achieved by this scheme, the alteration of the wage structure is likely to result in inefficiencies in resource allocation. This will result as firms, in response to the administered factor price structure, choose combinations of skill classes of labor which differ from those which would be chosen if natural wage increases were permitted to occur. However, an alternative approach to explaining the existing pattern of relative wages suggests that the primary determinants of relative wages are social and institutional factors.[17] To the extent that this interpretation is correct, wage controls aimed at altering the structure of wages could set a new precedent which would have long-run effects. There would be no appreciable loss of efficiency from this redistribution of labor incomes.

As examples of redistributional wage controls, consider the following two wage control schemes involving differential ceilings on high and low wage workers. In the first scheme, let us define a poverty wage rate, W_p. For wage rates at or above this level, let us set a ceiling rate, denoted as g, on the annual proportional rate of growth of the wage—indicating that the ceiling wage rate one year hence for a worker initially earning W_p is $W_q = W_p (1+g)$. Figure 2 depicts this ceiling as the horizontal portion of the solid line. The assumed neutral growth rate ceilings are depicted by the dashed line, while the natural growth rates, which lie above the neutral ceilings, are not depicted at all (see Figure 1). For all workers initially earning a wage (W_1) less than W_p, there is no explicit ceiling rate, subject to the condition that the final wage ($W_1 + \Delta W_1$) is no greater than W_q. However, this ceiling on $W_1 + \Delta W_1$ defines a pattern of implicit ceilings on the rates of increase of wages below W_p; these implicit ceiling rates are depicted by the sloping portion of the solid line in Figure 2. Interestingly, these implicit ceiling rates for low wage growth merge neatly with the constant rate ceiling, g, at the poverty wage. For a wage considerably below W_p, the ceiling rate is quite high; hence, this control scheme will be positively redistributional if g is held below the neutral ceiling growth rate of wages for the high wage worker.

In a variant of this control scheme, a ceiling equal to some proportion of the difference between W_q and the current low wage level would be set on wage level increases for low wage workers. If this ceiling is achieved by all low wage workers, the effect of the scheme would be identical to that of a wage rate subsidy policy. In addition to increasing the relative wage rate for low wage workers, such a scheme would tend to increase the supply of low skill workers who, in an expanding economy, would be likely to find employment. Both the wage rate and employment effects, then, would tend to reduce the inequity in the distribution of income.

While such a scheme is likely to equalize the distribution of income, its effectiveness in reducing poverty is not likely to be high. Evidence on this is obtainable by analyzing the "target effectiveness" of a universal wage rate subsidy plan which supplements low wages with one-half of the difference between the actual wage rate and the poverty wage rate, W_p. In one recent study of this plan, it was shown that about three-fourths of the families receiving benefits from the plan

[17] See, for example, Lester Thurow, "The American Distribution of Income: A Structural Problem," A Study for the Joint Economic Committee, March 17, 1972.

were nonpoor.[18] This is so because many low wage workers are secondary workers in nonpoor families or primary workers in families with substantial nonlabor income. This lends support to our judgment stated earlier that a price control system designed to reduce the inequality in the income distribution may not have a significant poverty reduction impact.

A second, and more general, wage control scheme with a distributional objective is one which is positively redistributional without explicitly identifying a "poverty wage". In this scheme, proportional wage rate increases are declared subject to a ceiling such that the allowed growth rates in wages are greater than the neutral ceiling rate for low wages and less than the neutral ceiling rate for high wages. Such a plan is illustrated in Figure 3, again for the case in which the neutral ceiling rate of increase of wages is a decreasing function of the wage level. It should be noted that, as compared to the scheme illustrated in Figure 2, this scheme constrains the wage increases of high wage workers more tightly than the increases of intermediate wage rates. Indeed, the scheme illustrated in Figure 2 places the burden of the income redistribution policy on workers in the middle wage rate categories.[19]

While the distributional advantages of these wage control schemes are important, the social and political difficulties of implementing such policies must not be neglected. Clearly, because Phase II has established the concept of "equitable" to mean equal proportional wage increase ceilings and because labor organizations might regard redistributive wage controls as being against the interests of their membership, the adoption of a new policy will be difficult. Nonetheless, income redistribution does seem to be socially desired in the United States—as evidenced by the existence of progressive income taxes and the War on Poverty. Viewed in this perspective an explicit policy to moderately redistribute income through a wage control system appears reasonable, should any price control system be implemented.

The redistributive profit and wage controls which we have analyzed would have interactive effects which would be felt throughout the economy. The general equilibrium impact of these policies must be considered, even if the amount of redistribution aimed for through the controls system is modest.

In the production sector of the economy, as the expansion yields unemployment rates below 3.5 percent, demand for high skill and managerial workers will increase. Assuming that the economy's supply of these factors is relatively fixed in the short run, their natural relative wages would be bid up—but this is to be prevented under the wage control system. However, this interference with the market price

[18] Michael C. Barth, "Universal Wage-Rate Subsidy: Benefits and Effects," in U.S. Congress, Joint Economic Committee, *The Economics of Federal Subsidy Programs*, Pt. 4, 1972; also Robert H. Haveman, "Work-Conditioned Subsidies as an Income Maintenance Strategy: Issues of Program Structure and Integration," Institute for Research on Poverty Discussion Paper No. 141-72, 1972.

[19] The analysis of both schemes is premised on our analysis that in an economic expansion from, say, 5.5 percent to 3.5 percent unemployment, the natural rate of wage increases would be higher for low than for high wage workers. If this analysis is incorrect, further work on estimating natural growth rates will be required to implement a controls policy with known redistributional effects. However, the criterion discussed earlier will still be the valid one: a positively redistributive wage control policy will allow wages to grow at a faster than neutral ceiling rate for low wages, and at a slower than neutral ceiling rate for high wages. Clearly, if there is uncertainty as to the true pattern of natural rates, the best policy decision would be to assume that the control ceilings must be a decreasing function of the wage rate (i.e., downward sloping, as in Figure 3) in order for them to be positively redistributive.

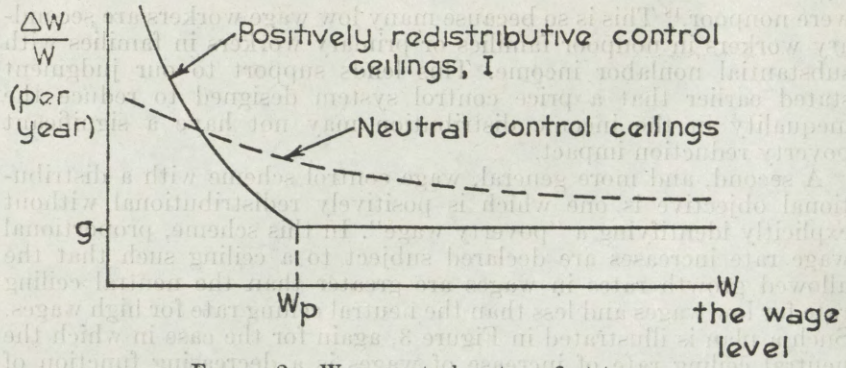

FIGURE 2.—Wage control system, first type.

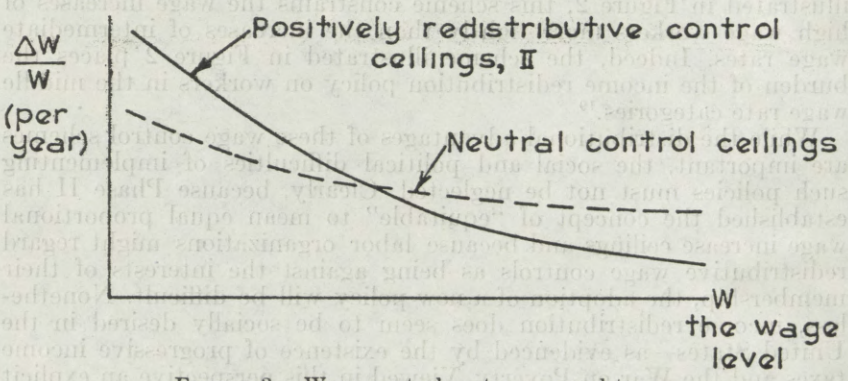

FIGURE 3.—Wage control system, second type.

would not generate inefficiency in resource allocation; the increase in wages for such workers represents an economic rent and not an increase in productivity. In this case, firms would be forced to satisfy their demands for high skill labor either by upgrading labor (and absorbing the training costs) or by shifting their production processes to use more low skill labor. These alternatives will have the effects of decreasing supply or increasing demand, respectively, in the lower skill markets, thus increasing the wage firms would want to pay to such workers.

With wages and employment opportunities advancing in the low skill sector of labor markets, a positive supply response may be expected. A substantial reservoir of labor services lies within this sector: secondary workers, teenagers, and welfare recipients. All of these persons will benefit considerably from the expansion. As this occurs, transfer payments to the poor, or the lower fifth of the population (*as classed by income*), could decrease.[20]

Other general equilibrium effects would follow from changes in the composition of consumer demand, and still other effects would be felt from alterations in industrial structure and regional growth

[20] This would modify our earlier analysis that altering the ratio of profits to wages would have little impact on the poor: in an expanding economy the share of income from labor for those classified as poor should increase.

patterns. While we do not expect these interactive or general equilibrium effects to be large from any modest program for income redistribution through price controls, policymakers should at least be aware of the direction of the effects attributable to policy actions.

IV. Conclusion

In this paper, we have explored the feasibility of using a system of national price controls as an instrument for reducing the inequality in the distribution of income. While being generally skeptical of the overall desirability of price controls, we have assumed in our analysis that some such system has been decided upon to control the price increase accompanying an expansionist fiscal-monetary policy.

From our explorations, we have concluded that a price control strategy designed to redistribute income toward low and middle income groups should concentrate on two primary measures:

1. Establishing ceilings on the growth of profits such that the overall effect of the price controls system is to decrease the ratio of property income to labor income.
2. Permitting wage increases for low wage workers to be higher than the increases allowed them under a neutral policy, and constraining wage increases for high wage workers to be lower than those allowed by a neutral policy.

While both of these measures will tend to shift income from higher to lower income groups—hence, increasing the equality in the income distribution—they may have relatively little impact in reducing the incidence of poverty.

THE 1973 WAGE NEGOTIATIONS

By FRANK C. PIERSON*

Major bargaining settlements in 1973 will be a critical element in determining the future of the country's wage-price control program. Four choices face Congress in evaluating next steps in the program which, in the interest of brevity, may be labeled: Loosen, tighten, hold unchanged, or eliminate altogether.

In choosing among these four possibilities Congress will need to consider these questions:

1. How will 1973 negotiations in the country's major bargaining situations affect overall wage and price developments in the economy?
2. What implications follow from the findings on this question for the future of the wage-price control program?
3. How much weight should be placed on the wage bargaining aspects of the control effort, as opposed to the many other considerations involved, in deciding what the future of the program should be?

While it would be premature to predict at this point just how the major wage negotiations will turn out next year, the general outline is clear enough to make possible some broad inferences even at this early date. In terms of worker coverage and potential impact, union contract settlements in 1973 will be among the most important of the last 10 or 15 years. According to the Department of Labor's latest Wage Calendar (January 1972), contract expirations affecting 1,000 or more workers will apply to some 4 million employees in 1973 as against about 2.6 million in 1972. While expirations in 1973 will entail bargaining in only 679 situations compared to 888 in 1972, a significantly greater number of the Nation's "wage-leading" settlements will be involved in the 1973 negotiations. Some of the most important of these will involve the major manufacturing unions and corporations; in automobiles, electrical equipment, rubber tires, meat packing, electric utilities, and clothing. Major negotiations will also take place in construction, railroads and trucking. A listing of some, but by no means all, of the major negotiations, with a very tentative indication of the principal demands in each case, is given in the accompanying table.

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TABLE 1.—*Major 1973 contracts, demands at a glance*

RUBBER	
URW contracts with the Big Four rubber producers involving 70,000 workers expire in April. Its contract with General Tire & Rubber Co. lapses in May. The rest of URW's members negotiate on smaller contracts during the year.	Job security. Improved retirement benefits. Shorter contracts. Liberalization of supplemental unemployment benefits. Improved insurance. Better plant health and safety efforts. Cost-of-living escalator.
ELECTRICAL	
IUE's contract covering 90,000 members and UE's pact for 17,000 members at GE expire in May. IUE's agreement for 40,000 and UE's contract for 9,000 at Westinghouse lapse in June. IUE also has a contract covering 33,000 at GM up in September. The International Brotherhood of Electrical Workers has agreements covering 14,500 at Pacific Gas & Electric Co. up in June and one involving 19,200 at RCA expiring in December.	Higher pay. Improved pensions. Union shop status. Improved insurance. Cost-of-living provisions.
TRUCKING	
National Master Freight agreements covering 450,000 Teamsters expire in June. The Chicago Truck Drivers Union pact involving 12,000 drivers lapses in March. Contracts for 110,000 other Teamsters expire during the year.	Moderate pay increases. Liberalized fringes.
RAILROADS	
Pacts covering more than 566,000 members of 15 railroad unions come up for talks on July 1, their first common expiration date.	Higher pay. Shorter workweek. Improved pensions. Job protection.
AUTOS, FARM IMPLEMENTS	
UAW contracts with Big Three automakers involving 670,000 workers are up in September. Other UAW pacts covering more than 106,000 employees expire during the year.	Reducing job boredom. Higher pay. Improved cost-of-living provisions. Increased insurance benefits. Sixth week of vacation after 20 years' service. Improved tuition refund program. Voluntary overtime. Job security. Eliminating the timeclock.
WESTERN UNION	
UTW's Western Union Div. contract covering 13,000 employees is up in July, while CWA Local 1177's pact for its 1,500 members expires in September.	Job security. Higher pay. Reducing contracting out work.
CONSTRUCTION	
Major construction industry contracts involving nearly 400,000 workers expire during the year.	Work rules changes. Higher pay. Improved fringes.

Source: Thomas G. Rees and others, "Labor in '73: Tough But Less Hostile," *Industry Week*, Oct. 16, 1972, p. 37.

In terms of the wage-price control program the most significant negotiations will occur in the first half of 1973, with the months of April through June being especially important. The principal bargaining during this period, in fact probably the most important in all of 1973, will occur in April when new agreement talks will begin between the United Rubber Workers and the major tire companies. Historically, the outcome of these negotiations has provided the floor from which contract bargaining in automobiles (scheduled for September 1973) has started. Furthermore, the rubber tire negotiations will have an important bearing on contract talks in the electrical equipment industry in May and June, in the meat packing industry in August, and even on the Big Steel negotiations scheduled for 1974.

Outside heavy manufacturing, pattern following (or more accurately, pattern-following tendencies) are much less prevalent, so while a number of important contract expirations will occur in the first half of 1973 in apparel, food stores, and gas and electric utilities, they will not have nearly as broad an effect on wage-price trends in the rest of the economy. Bargaining outcomes in three nonmanufacturing areas, however, will be of national significance in their own right: trucking, construction, and railroads.

Important negotiations in the trucking industry will begin as early as March in the Chicago area but the National Master Freight agreements will not expire until June 30. As in 1970, the Chicago negotiations may have a bellwether effect on the national agreement. But as of now it would not appear that wages will be the key issue in the 1973 trucking negotiations. Truck driver rates in most of the major Teamster agreements are already relatively high. The factors of nonunion competition in combination with serious unemployment in some centers are beginning to make themselves felt. Relations between the Teamsters and the current administration are amicable and presumably quite cooperative. Existing policies of the Pay Board provide considerable latitude for bargaining, especially with respect to cost of living escalator clauses, on the part of unions like the Teamsters. It would be rash to predict that bargaining negotiations in trucking will be marred by few important strikes in 1973, but it is reasonably safe to say that the disputes that do arise in this industry next year will concern work conditions, contract language and fringes such as vacation pay, rather than wage level adjustments as such.

Bargaining prospects in construction for 1973 are a good deal more cloudy and disturbing. True, only some 400,000 workers will be directly affected by the major settlements next year, about one-half the number covered in the series of negotiations that took place in 1972. Moreover, there has been a distinct slackening in the pace of wage increases in the construction industry in the past 2 years. According to the most recent issue of the Department of Labor's *Current Wage Developments* (November 1972), the annual percentage increase in average hourly earnings for the 12 months ending October 1972 was 5.0 percent as compared to 8.0 percent for the 12 months ending in October 1971. Controls were applied in the construction industry in March 1971 when the Construction Industry Stabilization Committee was established, and the deceleration in wage increases in this industry can be attributed in part to the Committee's activities. What may be a more important factor, however, is that the national union offices have established a good deal more control

over local wage negotiations in the construction industry than was true in the past and also that employment conditions in the unionized trades are far from favorable in a number of localities. One of the issues that contractors will doubtless push in next year's talks is the long standing question of work rules.

A new element that is bound to effect construction bargaining in 1973 stems from the fact that the industry has shifted to a predominantly 1-year, as opposed to a 2- or 3-year pattern of labor contracts. This will serve to concentrate more bargaining pressures on any given year rather than spread them out over longer periods, and would doubtless result in a very sharp run-up in construction wage levels next year if controls were removed.

In the railroad industry contracts covering the 15 rail unions with some 560,000 members all "reopen" on July 1—the first common expiration date in railroad history. While the demands of the unions are not yet completely formulated the shop crafts are talking about asking for a 30 percent rise in wages and a 4-day workweek. In the last settlement the workers won pay increases of 42 percent over 42 months. Both the unions and companies agree that employment attrition is rapidly undermining the Railroad Retirement Fund and that steps will have to be taken, perhaps by merging the fund into the Social Security program, in order to maintain the present rate of benefits which expires on June 30, 1973, and to keep the industry's pension system from going into bankruptcy. This issue has been thoroughly analyzed by the Commission on Railroad Retirement in its recent report, "The Railroad Retirement System: Its Coming Crisis." (92d Cong., 2d Sess., House Doc. No. 92–350, Sept. 5, 1972.)

Despite the importance of next year's negotiations in these three industries, the crucial test for wage-price control in 1973 will nonetheless come in the big manufacturing industries. Given present circumstances and prospects, there is little reason to believe that existing wage ceilings will be seriously breached in these industries although there will undoubtedly be very hard bargaining on various collateral issues and some prolonged strikes may well occur. The existing standards of the Pay Board, as already indicated, provide considerable latitude with respect to wage increases. In addition to the 5.5 percent rule, another seven-tenths of 1 percent is permitted for "qualified fringes" (pensions, profit sharing, savings, insurance, and health plans); the Board also permits such qualified fringe benefits to be included in determining the base from which permissible increases are to be determined. These, together with certain technical regulaulations, could yield adjustments of 6½ percent or more in given cases, even where no tandem relationships, productivity incentive plans, gross inequities or similar exceptions are involved.

Much of the focus of 1973 bargaining pressure in mass-production manufacturing will concern such issues as job security, vacations, medical care, length of the work week, work conditions and the like—issues with considerable economic impact but not all within the most direct focus of the wage control program. Thus, at the United Rubber Workers' convention in September the strongest local union support was given to demands for improved job security, retirement benefits and insurance protection. In the automobile industry the UAW has already indicated that it will push hard for improved plant conditions and job satisfactions in addition to higher retirement benefits, more

generous insurance benefits, voluntary overtime, longer vacations and the like. It hardly need be added that the unions in the large-scale manufacturing industries will still press for as big wage increases as the control program will allow. Indeed, in the case of next year's negotiations in the electrical equipment industry, union spokesmen have indicated that wage increases will be given top billing along with pensions, insurance and contract language. The Pay Board will have to weigh these diverse demands very carefully to determine at what point they will negate the Board's present criteria for controlling hourly compensation costs.

This raises the question, noted earlier, whether the major negotiations and settlements in 1973 should prompt a restructuring or even the elimination, of the present wage-price control program. The first fact to take into account in this connection is that the major bargaining settlements are as important for wage and cost trends in other industries as for the industries immediately concerned. As evidenced in the regulations of the Pay Board, tandem relationships and various historical uniformities are characteristic of many sections of the country's wage structure. The outcome of negotiations in these key bargaining situations will have important ripple effects on the wage levels of many other industries and not just on unionized firms either. These effects can be expected to extend beyond 1973 as well. There is no question, for example, but what the outcome of next year's major negotiations will have a substantial impact on the negotiations that will take place in steel in 1974.

A second fact to reckon with is that the major bargaining settlements in 1973 will go far towards either confirming or refuting the proposition that inflationary expectations have been effectively checked. If the key settlements can be held to roughly the pattern of major bargaining increases that were secured in 1972, a strong base will be provided for holding the general pace of inflation to its 1972 rate of increase or for reducing it further. Any substantial breakthrough in the pattern of 1972 wage increases, on the other hand, can be expected to shift expectations in a more pronounced inflationary direction almost immediately.

Beyond this general statement, it is hard to be much more definite about the relationship of major bargaining settlements to overall trends in wages and prices in the economy as a whole. The predominent view of economists is that in most circumstances the major settlements are the product of broad economic forces rather than constituting a significantly causal influence in their own right. On the other hand, most would probably agree that, given the particular economic configuration of any year or short-term period, such settlements can well spell the difference between accelerating, decelerating or even reversing general wage-price changes that are already underway. One such period was 1956–59 when compensation per man hour in manufacturing rose from an index of 64 to 74 and unit labor costs rose from 85 to 90 (1967 = 100). Another such period was 1969–70 when the hourly compensation index in manufacturing rose from 114 to 129, and the unit labor cost index from 108 to 116, on the same base. In the latter period, the rise in both indexes was even more striking in nonmanufacturing, in large part a reflection of the upsurge in wages in construction.

How did the major bargaining settlements compare with these general wage movements? Data for the 1956–59 period are limited, al-

though the Department of Labor reports that a study of agreements covering 1,000 or more workers showed average annual increases of 4–5 percent during those years, a significant rise from preceding years. After a long period in the 1960's when the major settlements were yielding annual increases of about 3 percent, a steady rise in the rate of increase began in 1965, moving from 3.4 percent that year to 8 percent in 1971. The details for this most recent period are shown in the accompanying table.

TABLE 2.—AVERAGE GENERAL WAGE CHANGES IN COLLECTIVE BARGAINING AGREEMENTS COVERING 1,000 WORKERS OR MORE, 1965–71—CHANGES EFFECTIVE IN YEAR

Year	All industries studied, annual percentage, median increase	Manufacturing annual percentage, median increase	Nonmanufacturing annual percentage, median increase
1965	3.5	3.7	3.4
1966	4.0	4.2	3.9
1967	4.8	4.4	5.2
1968	5.7	5.4	6.5
1969	5.1	5.0	5.6
1970	7.8	6.0	9.7
1971	9.2	6.6	12.1

Source: U.S. Department of Labor, Bureau of Labor Statistics, Office of Wages and Industrial Relations. The foregoing data reflect changes during the life of contracts. Data for first-year changes in contracts would show sharper gains during these years.

Data on the largest of the major settlements (largest defined as settlements affecting 5,000 workers or more) reflect similar trends as shown in Table 3. These figures reflect changes in wages and benefits but as regards changes effective in each year, cover a shorter time period, only 1968–71.

TABLE 3.—AVERAGE PERCENT CHANGES IN HOURLY COST OF WAGES AND BENEFITS NEGOTIATED IN COLLECTIVE BARGAINING SETTLEMENTS COVERING 5,000 WORKERS OR MORE,[1] 1965–71

Year	All industries studied		Manufacturing		Nonmanufacturing	
	Mean adjustment	Median adjustment	Mean adjustment	Median adjustment	Mean adjustment	Median adjustment
1st-year changes in contracts negotiated during year:						
1966	6.1	5.8	(2)	(2)	(2)	(2)
1967	7.4	7.3	(2)	(2)	(2)	(2)
1968	8.7	8.1	8.7	8.1	8.6	8.2
1969	10.9	10.9	9.6	8.8	12.3	11.8
1970	13.1	12.0	9.9	8.8	15.9	14.0
1971	13.1	13.9	11.7	13.5	14.1	16.0
Annual rate of change over life of contracts negotiated during year:						
1965	(2)	3.3	(2)	(2)	(2)	(2)
1966	4.1	4.0	(2)	(2)	(2)	(2)
1967	5.1	5.2	(2)	(2)	(2)	(2)
1968	6.5	6.0	5.9	5.9	7.1	6.5
1969	8.2	7.4	6.6	6.6	9.7	9.6
1970	9.1	8.4	6.2	5.5	11.5	11.7
1971	8.8	9.0	7.7	8.8	9.5	9.0
Changes effective in year:						
1968	6.8	6.4	(2)	(2)	(2)	(2)
1969	6.5	5.7	(2)	(2)	(2)	(2)
1970	9.0	8.7	(2)	(2)	(2)	(2)
1971	9.8	8.5	(2)	(2)	(2)	(2)

[1] Coverage limited to settlements for 10,000 workers or more in 1965.
[2] Not available.

Source: U.S. Department of Labor, Bureau of Labor and Statistics, Office of Wages and Industrial Relations.

Based on figures for the first three quarters of 1972, increases for all of 1972 can be expected to be about 1 to 1½ percent less than in 1971. This would be in line with a projected decline of roughly 1 percent in the rate of increase in the compensation per hour of all employees in the private, nonfarm economy. It is clear that wage trends under both major union settlements and in the economy as a whole have been moving towards the level set by the Pay Board this year and that if the major settlements in 1973 break through the 1972 pattern of bargained increases, much of the momentum for achieving a less inflationary economy would be lost. Given these facts, it would seem most imprudent to eliminate wage-price controls in the immediate future.

Assuming the control program in some form is retained, the much more difficult question remains: How, if at all, should the program be modified? The observations which follow approach this question in terms of the principal wage negotiations scheduled for next year and grow out of a series of interviews with spokesmen for major unions, employers and government agencies.

One of two dilemmas will have to be resolved in deciding whether the present control program should be modified. One of these dilemmas is that if the pace of the current expansion slackens significantly, the question will have to be faced whether continuation of the program would do more harm than good. Some will argue that the big wage settlements could not have serious inflationary consequences under these circumstances and (somewhat inconsistently) that any ceiling on wage increases under these circumstances would simply provide a target for the big unions to shoot at. Others will argue that, as the 1969–70 episode makes clear, inflationary wage and price increases can occur in periods of business slack and that it is precisely in such contexts that controls make their greatest contribution.

Given the uncertainties of the next 12 months and beyond, it would seem only prudent to lean to the latter view. If a recessionary trend develops to the point where controls lose all of their bite, the costs encountered in continuing the program would surely be small compared to the consequences if, alternatively, inflationary conditions continued and no effective limits were set to wage and price increases. The more relevant question to consider in the event of an economic slowdown is whether the permissible limits on wage and price increases should be lowered from present levels on the assumption that wages and prices generally could be expected to move in a more noninflationary direction under such circumstances. In strictly economic terms, this view has a certain logic; if the trend in consumer price increases continues to decline and the increase in the national income price deflator falls towards, say, a 2 percent annual rate, it could be argued that the 5.5 percent ceiling on wage increases should be reduced by a one-half percentage point or even more. From a practical standpoint, however, any lowering of the wage increase ceiling would run into a host of difficulties. Some unions would have beat the new deadline, others not; traditional wage relationships would either have to be disregarded or the whole matter of tandem adjustments, catch-up arrangements and the like would have to be reopened. If a reduction in the wage increase ceiling is called for, it would probably be better to eliminate controls altogether.

The other dilemma will arise if the current expansion continues to move up strongly towards the full-employment level with demand pulling wages, prices and profits upwards at accelerating rates. In this event, some will argue that controls would be all the more necessary in order to avoid runaway inflation. Others will contend that the control program would be not only ineffective under these circumstances but actually an important contributor to the evil it is supposed to cure. In light of these possibilities and conflicting views, what position would seem the most tenable one to adopt?

Recent interviews with a wide number of union, employer, and government spokesmen have all underscored one point: If the key prices in the consumers' market basket were to rise much faster than 3 percent per annum for any extended period of time, existing wage-price restrictions would soon be undermined and the entire program rendered ineffective. There is evidence that the major unions already consider the program to be stacked against worker groups. Unless price increases are held closely to the 2.5 percent ceiling figure, protest actions of one form or another aimed at the wage-price control program are sure to occur.

Viewed in these terms, the Government faces a hard choice in deciding on the future of the wage-price control effort: either to impose ceilings on those prices or incomes not now covered which may rise rapidly in the future (certain foods, interest charges, rental costs, profit margins, etc.), or to narrow the scope of existing regulations and concentrate on a relatively few, critically important wage and price situations. There are obvious dangers in either course of action. To broaden the scope of the control program would involve extremely difficult issues of administration and enforcement. Given prevailing attitudes, there are strong doubts that the American business community would be willing to support the detailed, complex regulations that would be involved. To narrow the program's scope, on the other hand, would entail much argument and frustration in deciding who would and who would not still be covered by the regulations. Changing the jurisdictional scope of a program of this sort in either direction could not help but engender a great deal of confusion and maneuvering among those workers and employers who found themselves just inside or outside the new rules. Once the essential elements of a control program have been worked out, there are important advantages in keeping its general scope unchanged until the time has come for eliminating it altogether.

One change that might be made would be to treat Category II firms (units of 1,000 to 5,000 workers) the same way as Category III firms (those of less than 1,000 workers), i.e., eliminate the present requirement that Category II firms must report all wage and pay increases to the Pay Board. At present, Category III firms are not required to report or get Pay Board approval unless the increases exceed the general standard. This change would greatly reduce the amount of paper work required of Category II companies as well as of the Pay Board without essentially altering the Board's present policies. More sweeping changes would very likely cause more difficulty than they would be worth.

This general recommendation would be less easy to defend if it were certain that the economy would move strongly next year either away

from or towards full employment. What is more likely, however, is that economy will score only a limited advance towards this goal with considerable upward pressures still being exerted on wages and prices but with an unemployment rate of 5 percent or more still persisting. Given this mix of circumstances and uncertainties, there would be little justification for assuming that the cost-push pressures in 1973 would be materially different from what they were in 1972. Aside from a few explosive situations in the economy which might require specific counter measures next year, it would therefore seem appropriate to leave the wage-price program essentially unchanged for the immediate future.

UNION AND NON-UNION WAGE CHANGES, 1959–1972

By MARTEN ESTEY*

Any attempt to compare the behavior of union and non-union wages in the U.S. over a significant period of time is limited at the outset by the fact that the only time series providing such a specific comparison is the Bureau of Labor Statistics (BLS) series on union and non-union wages in manufacturing, which provides annual data on general wage changes from 1959 through 1971, and, in somewhat different form, quarterly data from 1969–I through 1972–III.

Although the Pay Board has recently made available data on wage increases approved through November 13, 1972 that give a broad picture of union and non-union wage changes for all sectors of the economy subject to Pay Board regulations, its data provide a snapshot, rather than a movie, and thus shed no light on the patterns of change over time.

The BLS data on wage changes in manufacturing in 1971 covered about 11.8 million production and non-supervisory workers, or roughly one quarter of such workers on private non-farm payrolls.[1] Of these 11.8 million workers, approximately 9.1 million were employed in unionized establishments; they accounted for approximately half of all workers covered by collective bargaining agreements in the private sector. The 2.7 million workers in non-union plants, on the other hand, comprised only about one-tenth of non-union production and supervisory employees in the private sector.

It should be kept in mind, therefore, that the manufacturing industries probably provide a more representative picture of union than of non-union wage behavior.

I. BLS ANNUAL DATA, 1959–1971

As indicated above, there is a difference between the BLS data for the period 1959–1971, and for the period 1969–I through 1972–III. For the years 1959–1971, the BLS published annual *median* percentage changes in wages of production workers in both union and non-union manufacturing establishments.[2] These annual median percentage changes, in turn, were provided in four separate measures—two involving *current* wage changes, which result from decisions made in the report year, and two reflecting *effective* wage changes, which are the combination of current wage changes, deferred increases and cost-of-living increases. Both current and effective wage changes, in turn, are separated into two additional categories—those involving only *increases*, and those involving *adjustments*, which include cases in which

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[1] Unpublished data made available by the Bureau of Labor Statistics.

[2] Median cents-per-hour changes are also available for this period, but are not included in this study.

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wages are unchanged or decreased, as well as increased. These measures are shown in Tables 1 and 2 and are examined below.

TABLE 1.—CURRENT WAGE CHANGES, 1959-70, PRODUCTION WORKERS IN MANUFACTURING

	Year—												
	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
I (a) Median increases—Annual percentage change:													
All union	[1] 3.7	[1] 3.5	2.5	2.9	2.9	2.5	3.6	4.1	5.5	6.5	6.9	7.4	8.4
Nonunion	[1] 4.4	[1] 3.8	3.4	3.2	.36	3.2	4.0	4.4	5.0	5.0	6.0	5.8	5.5
I (b) Median adjustments—Annual percentage change:													
All union	[1] 3.4	[1] 3.4	2.5	2.5	2.6	2.3	3.4	4.0	5.5	6.4	6.9	7.3	8.2
Nonunion	[1] 3.2	[1] 2.2	1.2	1.6	2.8	2.0	3.2	3.7	4.4	5.0	5.1	5.0	4.7
I (c) Workers receiving increases as percent of workers subject to wage decisions:													
All union	93.7	93.1	89.5	74.4	77.3	89.3	92.5	96.1	98.4	99.3	98.9	98.1	98.3
Nnonunion	66.5	56.8	52.8	53.2	69.2	55.5	75.3	77.8	80.8	87.0	75.8	76.7	69.6

[1] Estimated.

Source: "Wage Developments in Manufacturing, 1970," "Current Wage Developments," No. 285, October 1971 p. 26, table 1; and unpublished data supplied by Bureau of Labor Statistics.

TABLE 2.—EFFECTIVE WAGE CHANGES, 1969-70, PRODUCTION WORKERS IN MANUFACTURING

	Year—												
	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
II (a) Median increases—Annual percentage change:													
All union	[1] 3.6	[1] 3.6	3.0	3.0	3.0	2.6	3.2	3.8	3.9	5.1	5.0	5.9	6.2
Nonunion	[1] 4.3	[1] 3.8	3.3	3.2	3.7	3.2	4.0	4.5	4.8	5.0	6.0	5.9	5.5
II (b) Median adjustments:													
All union	[1] 3.4	[1] 3.4	2.7	2.6	2.6	2.2	2.9	3.2	4.0	5.0	5.0	5.7	6.1
Nonunion	[1] 3.3	[1] 2.5	1.0	1.6	2.8	2.0	3.2	3.9	.6	5.0	5.1	5.1	4.7

[1] Estimated.

Source: "Wage Developments in Manufacturing, 1970," "Current Wage Developments," No. 285, October 1971, p. 26, table 2; and unpublished data supplied by the Bureau of Labor Statistics.

A. Current Wage Decisions

In discussing current wage decisions, it should be emphasized that there are significant differences between union and non-union manufacturing plants, both in the frequency with which wage decisions are made, and in the prevalence of decisions to increase wages rather than to leave them unchanged. Thus we find that:

Union plants make new or current general wage decisions less frequently than non-union plants.

Union plants in manufacturing typically make general wage decisions *once every three years*, because collective bargaining agreements in manufacturing industries are commonly for three-year periods. As a result, in 1971, only 38.7 percent of the workers in unionized plants were affected by *current* wage decisions (i.e., new collective bargaining agreements).

Non-union plants, on the other hand, are assumed (with few exceptions)[3] to make decisions about general wage changes *every year*.

In 1971, for example, 98.4 percent of the workers in non-union plants were subject to a general wage decision.

[3] See "Wage Developments in Manufacturing, 1970," *Current Wage Developments*, No. 285, October 1971, p. 23.

When general wage decisions are made, decisions to increase wages are more prevalent in union plants than in non-union ones.

Between 1959 and 1971, of the workers subject to newly negotiated wage decisions in a given year, the proportion for whom these decisions resulted in a wage increase ranged from 74.4 percent in 1962 to 99.3 percent in 1968. In non-union plants, the proportions were significantly lower, ranging from 52.8 percent in 1961 to 87.0 percent in 1968.

1. CURRENT WAGE INCREASES

Current wage *increases* are of particular interest for the policy maker in a period of wage control, because it is to wage *increases* (deferred as well as current), rather than wage *adjustments* that controls apply.

From 1959 through 1966, the median percentage wage increase decided upon in non-union plants was consistently larger than in union plants. This was mainly due to the fact that wage levels were generally substantially lower in non-union plants than in unionized ones, so that roughly similar cents-per-hour increases represented a larger relative gain for the non-union worker than for the union member. From 1959 through 1966, the median union increase was never more than 1.5 cents, or 20 percent, greater than the median non-union increase.

From 1967 through 1971, however, this pattern was reversed, and the median percentage increase in union plants was consistently greater than in non-union plants. In this period, the median cents-per-hour increase in union plants ran from 40 to 99 per cent higher than in non-union plants—so that wage increases in union plants were greater in *both* absolute and prcentage terms.

2. CURRENT WAGE ADJUSTMENTS

The current wage *adjustment* is valuable primarily as an indicator of what might be called the net economic weight of wage decisions made in the current year, because it includes, in addition to situations in which wages were increased, those in which no wage changes were made, or where wages were decreased (although it should be noted that no wage *decreases* have appeared in the data since 1964). Accordingly, the relative importance or prevalence of wage increases, as well as their average size, is reflected in the current wage adjustment.

From 1959 through 1971, median current wage adjustments in union establishments exceeded those in non-union establishments in every year except 1963, when the median current wage adjustment in non-union establishments was 2.8 per cent, as against 2.6 per cent in unionized plants.

The fact that current *adjustments* in union plants should exceed those in non-union plants in the period 1959–1966, while current *increases* were consistently less reflects differentials in the prevalence of decisions to increase wages.

During this period, among workers subject to negotiations, the proportion who failed to receive a general wage increase was generally small—ranging from 3.9 per cent to 25.6 per cent, and as a consequence, current *adjustments* in unionized plants were only slightly smaller than current *increases*. In non-union plants, on the other hand, a significant

fraction of the workers subject to wage decisions from 1959 to 1966—from 22.2 per cent to 47.2 per cent—received no general wage increase. As a result, current *adjustments* in non-union plants were not only considerably smaller than the current *increases*, but smaller than current adjustments in union plants as well.

In short, despite the fact that wage increases in non-union plants were greater than those in union plants from 1959 through 1966, their net impact was more than offset by the large number of non-union workers whose employers decided against a wage increase.

B. Effective Wage Changes

In addition to wage changes resulting from *current* decisions, there are wage changes resulting from decisions made in previous years; these generally fall into two categories: (a) *deferred increases*, or those decided upon in a previous year but scheduled to take effect in the present year, and (b) *cost-of-living increases*, which were also decided upon in a previous year, but are conditional on the rise in the cost of living index.[4]

When the results of current wage decisions and the current results of previous wage decisions are combined, we have what is known as *effective* wage changes. Furthermore, as in the case of current wage decisions, effective wage changes are measured both in terms of *increases* and *adjustments*.

But two points are noteworthy here. First, deferred increases are seldom found in non-union plants; in the absence of contracts, and especially multi-year contracts, most wage increases in non-union plants result from current wage decisions. In 1971, for example, of the 2,710,000 non-union workers receiving wage increases only 44,000 received deferred wage increases; the rest received current increases. Absent deferred increases (practically speaking), the *effective* wage increase in non-union plants is virtually identical with the *current* wage increase—in seven of the thirteen years 1959–1971, in fact, the two measures *were* identical. And similarly, effective and current *adjustments* were identical in seven of the thirteen years.

Second, in the union case, although only approximately one-third of the workers receive current increases in any given year, a large proportion of the others receive a deferred increase, and some may get both a deferred and a current increase in the same year.

Accordingly, *effective* wage changes are in practice primarily concerned with *union* wage changes; they measure the extent to which the combination of current and deferred increases in union plants are affected by deferred increases, as the data for the period 1959–1971 reveal.

1. EFFECTIVE WAGE INCREASES

From 1959 through 1971, effective increases in non-union plants were typically greater than those in union plants, except in 1968, 1970, and 1971. This pattern is attributable to the fact that from 1959 through 1966, *current* increases in non-union plants exceed those in union plants, and that in 1967, 1969, and 1970, deferred increases in

[4] For purposes of this analysis, cost-of-living increases are not treated separately from deferred increases generally. For a detailed treatment of cost-of-living increases see L. M. David, "Cost-of-Living Escalation in Collective Bargaining," below, pp. 332–341.

union plants offset the fact that their *current* increases were larger than in non-union situations.

Perhaps more important, the BLS data suggest that in the period 1960 through 1964, when current wage increases were generally declining, deferred increases in union plants were larger than current increases, since for this five-year period, *effective* increases in union plants were consistently larger than *current* increases.

And from 1965 through 1971, deferred increases, as is generally known, lagged behind the rate of current increase, thus pulling the rate of effective wage change *below* the rate of current change.

2. EFFECTIVE ADJUSTMENTS

It may be argued that the effective adjustment is the most complete measure of wage change, because it includes all wage changes going into effect in a given year, and at the same time gives them proper weight by reflecting no change in wages. It is worth noting, therefore, that effective adjustments in union plants were greater than those in nonunion plants from 1959 through 1962, but were less than in non-union plants from 1965 through 1967.

II. BLS Quarterly Data, 1969–I Through 1972–III

With the advent of the Nixon administration, the Bureau of Labor Statistics introduced a new measure of wage change in manufacturing, the *mean* (instead of the median) current increase in wages, published quarterly rather than annually, but calculated in terms of annual percentage change.[5] In this new series, current adjustments are omitted, as are both effective increases and effective adjustments. The principal advantages of this new series appear to be that quarterly data permit quicker detection of changes in the direction of wage movements than do annual data, and that by concentrating on current increases only, they focus on the wage decisions that are most critical for wage control.

The quarter-to-quarter data, shown in Table 3, indicate that for the period 1969–I through 1972–III, wage increases in union manufacturing plants were consistently larger, in percentage terms, than wage increases in non-union plants. In this respect, it should be noted, the quarterly data on *mean* current increases continue the pattern which prevailed in the annual *median* current increases from 1967 through 1971.

The quarterly data also reinforce the evidence of the annual median data that non-union wages responded more rapidly to economic slowdown than union wages.

The largest increase in non-union wages came in 1969–IV, when the mean increase was 7.2 per cent; and although it fluctuated after 1969–IV, each succeeding peak and each successive trough was lower than its predecessor, so that the rate of increase of non-union wages clearly began to slow down as early as 1970–I.

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[5] See *Current Wage Developments*, No. 297, October 1972. The quarterly data are published both for individual quarters (in which case the percentage changes are calculated on an annual basis), and for annual periods ending in any given quarter. Our discussion here is limited to data for individual quarters, since it is a more sensitive indicator of changing trends.

TABLE 3.—CURRENT WAGE CHANGES 1969–72, PRODUCTION WORKERS IN MANUFACTURING MEAN INCREASES—PERCENTAGE CHANGE FROM PREVIOUS QUARTER, ANNUAL RATE

	1969 (quarters)				1970 (quarters)				1971 (quarters)				1972 (quarters)		
	I	II	III	IV	I	II	III	IV	I	II	III	IV	I	II	III
All union	6.7	7.6	7.9	7.5	7.6	8.2	8.3	6.9	8.0	8.6	12.9	8.6	6.5	6.1	5.6
Nonunion	5.5	5.8	6.2	7.2	5.4	5.2	6.1	5.9	5.5	5.0	5.6	5.1	4.4	4.9	4.3

Source: "Current wage developments," No. 285, October 1971, table 7, p. 21, and No. 297, October 1972, table 8, p. 38; and unpublished data supplied by the Bureau of Labor Statistics.

Union wages, on the other hand, continued to accelerate in spite of the slowdown of the economy, although they were perhaps more sensitive to economic conditions than generally recognized. Thus in 1969–III, and in 1970–IV, they slowed rather markedly. Indeed, the only sharp gain in the rate of union increases was in 1971–III, when the average wage increase in unionized manufacturing establishments was 12.9 per cent—nearly 50 per cent greater than the rate of increase in the previous quarter, perhaps because the steel settlement in July, which provided an estimated 15 percent first year increase, involved over 400,000 workers, more than half of the manufacturing employees affected by wage negotiations in this quarter.

A. Wage Changes During Phase II

Although this series is the only one available that covers both the periods before and during wage controls, it must be emphasized that they provide only the most tentative measure of the impact of controls, and that they should be used with great caution.

For we are currently in the position of having data for only three quarters in which Phase II was in effect during the entire quarter (1972–I through III), and only four quarters in which it was operative at all (Phase II began November 14, 1971, approximately in the middle of 1971–IV); in addition, the data for 1972–III are still preliminary and subject to revision. A "series" consisting of only four observations, and covering less than a year, permits at most a preliminary judgment of the relative impact of Phase II on wage changes in union versus non-union manufacturing establishments.

Having made this caveat, however, it should be noted that from 1971–III through 1972–III the mean wage increase in unionized manufacturing plants was reduced by more than half—falling from 12.9 per cent to 5.2 per cent. In non-union plants, on the other hand, the rate of wage increase fell from 5.6 per cent in 1971–III to 4.3 per cent in 1972–III—a net reduction of only one-fourth. *If* we take this limited measure at face value, and *if* we assume that the changes in both cases are due solely to the effect of Phase II controls program, it would appear that Phase II has had relatively more impact on union wages than on non-union ones.

But the reason for this differential impact is significant. In 1971–III, just before Phase II was initiated, the rate of increase in non-union wages was 5.6 per cent, only minimally higher than the 5.5 per cent general wage standard adopted by the Pay Board. In this situation, controls would be expected to result in little change in the size of

wage increases, because such slight reductions in the mean rate of increase would satisfy Pay Board requirements.

In unionized manufacturing establishments, on the other hand, mean wage increases in 1971–III were 12.9 per cent, or more than double the subsequent 5.5 percent pay standard. Here, a substantial reduction in the rate of wage increase was necessary to meet Pay Board Standards.

In short, when the speed limit (the general pay standard) was set union wage increases were exceeding it by a much wider margin than were non-union wage increases. Under these circumstances, enforcement of the speed limit was bound to have greater impact on the faster-moving union wages. But it does not mean that the speed limit is discriminatory.

III. The Pay Board Data on Union Versus Non-Union Settlements

With the establishment of the Pay Board, and Phase II, in November 1971, an additional source of data on union and non-union wages became available. It differs sharply from the BLS data, however, in two significant respects. First and most obvious, the data presently available from the Pay Board on union and non-union wage increases consist of a single set of cumulative figures covering the period November 14, 1971, through November 13, 1972; unlike the two BLS series, no earlier figures appear to have been published which would permit comparison with the current data. Second, and equally significant, the Pay Board data are not limited to the manufacturing industries, but instead embrace those segments of both the private and public sectors of the economy subject to the Pay Board regulations. In addition, Pay Board data are limited to situations involving 1,000 or more workers, though the BLS data are not. Thus the Pay Board data are much broader in coverage than the BLS data, although much more limited in time.

Data for the year ending November 13, 1972,[6] show that *current* "control year" wage increases in union cases averaged 6.7 per cent, compared to 4.6 per cent in non-union cases. What would be comparable to the *effective* increases in BLS data (i.e., the combination of current and deferred increases) was 5.7 per cent in union cases, and 4.6 per cent in non-union ones.

But the definition of the "control year" raises an interesting question about these figures. Because the first "control year" in *union* cases runs from November 14, 1971, to the contract anniversary date, it is generally a "short" year.[7] The result, according to a Pay Board release, is that "during November 1971–November 1972 it is possible for a union unit to have two control years. This has the effect of raising the permissible increases during the 12-month November-to-November period." [8]

In non-union cases, on the other hand, the initial "control year" is the 12-month period beginning November 14, 1971, and non-union wage increases involve a full 12-month change.

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[6] Pay Board Statistical Release No. 40, November 20, 1972.

[7] See *Economic Stabilization Program Quarterly Report, Covering the Period January 1 Through March 31, 1972*, Washington: The Cost of Living Council, pp. 83–84.

[8] Letter to Professional Economists from Daniel J. B. Mitchell, Chief Economist, Pay Board, and Simplified Guide to Pay Board Regulations, pp. 9–10.

The result appears to be that because of the difference in the definition of their first "control year," union and non-union wage increases are not comparable, and that union wage increases are *understated* relative to non-union increases.

It is significant that in these Pay Board cases, current increases affected only one-fifth of the unionized employees, and four-fifths received deferred increases. In non-union cases, current increases predominated, affecting four-fifths of the workers, while only one-fifth got deferred increases—a pattern we have observed in BLS data.

In union cases, the proportion of workers receiving current increases is expected to rise substantially in 1973, when nearly twice as many workers are scheduled for wage negotiations as in 1972.

This change in the weights of current vs. deferred wage increases may have a major impact, for it means that *unless there is a decrease in the size of union wage increases*—either current or deferred—*the effective wage increase* (or what the Pay Board calls the "total" wage increase) *in union cases in 1973 would rise*, simply because it is a weighted average of the current and deferred increases.

Finally, it is interesting to note that through November 13, 1972, the average wage increase in non-union settlements approved by the Pay Board was *less* than the maximum permitted under the general pay standard. This is consistent with the recent pattern revealed by the BLS quarterly data on manufacturing, which show that in five of the past six quarters, the average wage increase in non-union plants has been less than 5.5 per cent.

IV. Summary and Policy Implications

Our principal findings can be summarized briefly, as follows:

1. At present, current or new wage increases in union situations are larger in percentage terms than in non-union situations, both in manufacturing and the economy as a whole. In manufacturing this has been the pattern since 1967.

2. During the period of wage-price control, the reduction in the size of current wage increases in manufacturing has been significantly greater in union than in non-union cases.

3. The heavy collective bargaining schedule for 1973 will significantly enhance the importance of current wage increases in the overall wage data, so that without a further decrease in current or deferred union wage increases, the average *effective* union increase will rise.

4. Historical data indicate that non-union wages respond more quickly to changing economic conditions than union wages, in both upturns and downturns. Non-union wage increases were larger than union increases throughout the period 1959–1966, and smaller from 1967 through 1971.

The policy implications of these findings are limited by several considerations:

a. The evidence provided by comparing union and non-union data in manufacturing involves only a very small segment of all non-union enterprises, and there is no easy basis for determining how representative this segment is. Furthermore, Pay Board data on union versus non-union wage changes are not comparable to the manufacturing data.

b. The data presented here deal with wage changes only, not wages and benefits combined.

c. So far as wage policy is concerned, many issues not covered in this paper are involved. Thus we qualify our policy comments by saying that *if the data summarized here were our only evidence, and if inflation control were the only concern:*

1. It may be argued that controls should be continued on union wages because union wage increases are still above the general pay standards, and because the bargaining schedule for 1973 will tend to boost the net effect of union wage changes.

2. Conversely, it may be argued that controls on non-union wages should be eliminated on the grounds that non-union wage increases are already below the general pay standard, both in manufacturing and, on the basis of Pay Board data, on an economy-wide basis as well.

3. On the other hand, the fact that non-union wages are more responsive to economic change, and that non-union wage increases were larger than union increases from 1959 to 1966, raises the question whether this pattern is about to be repeated as economic expansion continues. If so, this might be the worst time to de-control non-union wages.

COST-OF-LIVING ESCALATION IN COLLECTIVE BARGAINING

By LILY MARY DAVID

Rising living costs have long been a major factor in wage increases. In a survey made some 20 years ago they were cited by a large majority of unions as the most important factor in negotiations,[1] and they are perhaps even more important in determining wage increases for nonunion workers. Nonunion employers, like union employers, recognize the equity of increases to compensate for rising living costs. Moreover, while most unionized workers receive annual increases, nonunion establishments are more likely to confine wage increases to periods of prosperity, which are often periods of relatively rapid price increases.

EXTENT OF ESCALATION

Even though price increases are important factors in wage decisions in all sectors of the economy, automatic cost-of-living escalation of wages is relatively uncommon except for workers covered by major collective bargaining agreements. Although there is no hard information on formal escalator provisions for workers employed in nonunion and small unionized establishments, it seems clear that pay of fewer than 5 percent of these workers is automatically changed with price changes. By contrast, escalator clauses now cover approximately 40 percent of the workers employed under major collective bargaining agreements in the United States.

Of the estimated 5 million workers in the private economy in the United States covered by formal arrangements for cost-of-living escalation of their pay, 4.3 million are under major collective bargaining contracts.[2] The industries involved are shown in Table 1. The balance are under smaller union agreements, work in unorganized establishments, or are white-collar employees of companies with collective bargaining escalator clauses for their plant workers.[3] In addition, the 1971 contract for 650,000 Postal Service employees provided a one-time cost-of-living escalator adjustment in July 1972. Pay of some State and local government employees is also subject to cost-of-living escalation.

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[1] W. S. Woytinsky, *Labor and Management Look at Collective Bargaining*, 1949, p. 73.

[2] Contracts covering 1,000 or more workers.

[3] Provisions in some agreements for renegotiating wages whenever prices rise by a specified amount are not considered cost-of-living escalator clauses.

TABLE 1.—INDUSTRIES WITH COST-OF-LIVING ESCALATION, 1957–72

Year	Automobiles	Farm equipment	Aerospace	Trucking	Meatpacking	Steel	Aluminum	Cans	Railroads	Electrical equipment	Communications
1957	X	X	X	X	X	X	X	X	X	X	
1958	X	X	X	X	X	X	X	X	X	X	
1959	X	X	X	X	X	X	X	X	X	X	
1960	X	X	X	X	X	X	X	X	(1)	X	
1961	X	X	X	(2)	X	X	X	X	----	----	
1962	X	X	X	X	X	(1)	(1)	(1)	----	----	
1963	X	X	X	X	X	----	----	----	----	----	
1964	X	X	X	(2)	X	----	----	----	----	----	
1965	X	X	X	(2)	X	----	----	----	----	----	
1966	X	X	X	X	X	----	----	----	----	(3)	
1967	X	X	X	X	X	----	----	----	----	X	
1968	X	X	X	X	X	----	----	----	----	X	
1969	X	X	X	X	X	----	----	----	----	(2)	
1970	(2)	(2)	X	(2)	X	----	----	----	----	X	
1971	X	X	(2)	X	X	(3)	(3)	(3)	----	X	(4)
1972	X	X	X	X	X	X	X	X	----	X	X

1 Escalator discontinued during the year.
2 Escalator clause in effect but no review during the year.
3 Escalation reestablished during the year but the first review was deferred until the next year.
4 Escalation established during the year but the first review was deferred until 1972.

Source: Data from the Bureau of Labor Statistics.

Two major Federal pension systems are also covered by cost-of-living escalation. An estimated 1.9 million retired Federal Civil Service and military employees and about 28 million Social Security beneficiaries receive automatic increases in benefits with specified price changes. Private pensions rarely have an automatic tie to price changes, but some State and local government employees' pensions are subject to escalation. Pension escalation is not discussed further in this article.

Cost-of-living escalator arrangements spell out in advance the amount of change in pay that will be triggered by a given change in the price index (normally the BLS National Consumer Price Index). Escalators normally provide both for decreases and increases in wages, although reductions that might result from any price decline are limited; workers cannot lose more in wages than they have previously gained as a result of escalation.[4]

Changes in Extent and Characteristics

There were scattered provisions before the late 1940's for cost-of-living escalation, but its current history in the United States essentially began in 1948. In that year, General Motors and the United Automobile Workers adopted a long-term (2 year) contract which provided for annual pay increases to match the expected increase in productivity in the economy as a whole. A quarterly cost-of-living escalator was provided to protect these wage gains against changes in the purchasing power of the dollar.

Since the General Motors contract was negotiated, the popularity of escalation has fluctuated, depending on the extent of past and expected price increases and the prevalence of long-term collective bargaining contracts. Table 2 shows the estimated number of workers under escalation since the mid-1950's.

The General Motors contract was not immediately copied to any extent, in part because of American labor's historic opposition to tying wage rates to price changes and particularly to any provision for possible wage reductions, and in part because prices actually fell after 1948. It was only when Korean developments led to the possibilities of wage controls and rapidly rising prices that cost-of-living escalation spread significantly. In the 9 months from June 1950 to March 1951, the number of wage earners and salaried workers under escalation increased more than fivefold—to almost 3 million. By September 1952, this number reached 3.5 million.

In 1953 and 1954, as prices stabilized, escalation declined in popularity; the major defection came in the railroad industry. Then after 1955, as the number of long-term contracts increased, so did the popularity of cost-of-living escalation; escalation is rare in single year contracts. By 1957, the previous peak coverage of escalation was regained. Then, as prices rose relatively slowly, the number of workers covered by escalator clauses reached a peak of 4 million in early 1958, stabilized, and then declined. By 1963, fewer than half as many workers were protected by cost-of-living escalation as at the previous high.

[4] Normally the potential loss is less than the escalator gain, since agreements periodically transfer part of the accumulated cost-of-living increase to the workers' base wage. All that can be lost is the cost-of-living "float." Although they have been relatively uncommon, there were some quarters in the 1950's in which small wage cuts resulted from escalation.

TABLE 2.—PREVALENCE OF COST-OF-LIVING WAGE ESCALATION IN THE UNITED STATES, 1955–72

Year	Percent increase in CPI [1]	Number of workers under major collective bargaining agreements [2] (millions)	Number of workers covered by escalation on Jan. 1		Percent of workers under major contracts with escalator clauses
			Major contracts	Total [3]	
1955	0.4	7.5	1.7	2.0	23
1956	2.9	(4)	(4)	(4)	(4)
1957	3.0	[5] 7.8	3.5	3.8	45
1958	1.8	8.0	4.0	4.3	50
1959	1.5	8.0	4.0	4.4	50
1960	1.5	8.1	4.0	4.4	49
1961	.7	8.1	2.5–2.8	2.75–3.05	31–35
1962	1.2	8.0	2.5	2.75	31
1963	1.7	7.8	1.85	(4)	24
1964	1.2	7.8	2.0	2.6	26
1965	1.9	7.9	2.0	2.5	25
1966	3.4	10.0	2.0	2.5	20
1967	3.0	10.6	2.2	3.0	21
1968	4.7	10.6	2.46	(4)	23
1969	6.1	10.8	2.66	3.28	25
1970	6.2	10.8	2.8	3.62	26
1971	3.4	10.6	3.0	3.75	28
1972 [5]	(4)	10.5	4.3	5.05	41

[1] December to December.
[2] Prior to 1966, the construction, service, finance, insurance, and real estate industries were excluded.
[3] Rough estimates. None of the estimates include workers in small unionized or nonunion establishments outside manufacturing. Estimates prior to 1964 also excluded production workers in nonunion and small unionized establishments in manufacturing.
[4] Not available.
[5] Estimated. In addition, 650,000 Postal workers received a 1 time cost-of-living adjustment in July 1972.

Source: Data from the Bureau of Labor Statistics except estimate of total coverage for 1972.

The popularity of escalation again increased gradually during the second half of the 1960's. In 1971 came a sharp increase in coverage, as basic steel reinstituted escalation and the telephone industry adopted it for the first time. By the beginning of 1972 the number of workers under escalation had passed its former peak, although the *proportion* of workers with cost-of-living escalation remains somewhat lower than in the late 1950's and few new escalator clauses have been adopted in 1972.

Not only the extent but characteristics of the escalator clauses have varied from time to time. In the early years, quarterly adjustments were predominant. They applied to almost 90 percent of the workers subject to escalation in 1951, for example. Subsequently, there was a shift to semiannual and then annual reviews, culminating in 1967 when the Auto Workers abandoned 20 years of quarterly reviews in favor of annual adjustments. Then 3 years later, the pendulum began to swing back to quarterly adjustments, when the 1970 contracts of the Auto Workers re-established them, effective in 1972. Annual and quarterly reviews have been of almost equal importance in 1972.

Another recent development has been the growth and decline of escalator ceilings. Early escalator clauses did not establish such maximums. The very large escalator increases that went into effect under the basic steel contracts negotiated in 1956 led to establishment of a low escalation ceiling in the contracts negotiated 3 years later. Ceilings again became popular in the late 1960's as a result of the accelerated rise in prices. The number of wage earners subject to such maximums jumped from 50,000 in 1966 to 1.9 million by the end of 1968. From 1968 to 1970, three-fifths to three-fourths of the workers subject to escalation under major contracts could receive no more than a specified escalator raise. The most common ceilings were 4 to 8

cents a year. Since then the prevalence of maximum limits on escalation has declined, notably after their abandonment by the 1970 auto contracts. At present, about 1 out of 5 workers under major contracts with escalation are subject to such a ceiling.[5]

In years of rapid price rises these ceilings have substantially cut the size of cost-of-living escalator adjustments. For example, the 16-cent ceiling on the total escalator adjustments major auto company employees could receive under their 1967 contracts reduced their cost-of-living increase by 26 cents.[6]

Over the entire period since World War II, most cost-of-living escalator adjustments have consisted of uniform cents-per-hour or dollar-per-week changes for all workers covered by the contract. Only a limited number of contracts, notably in the electrical equipment industry, have provided for percentage changes, and recent electrical agreements changed escalation to a cents-per-hour basis. Presumably the main reason for uniform money adjustments, which give the lower paid workers in an establishment above average percentage increases, is recognition of the fact that these workers are hardest hit by rising prices.

Control Policies

Policy with respect to cost-of-living escalation has varied from one control period to another. As Milton Derber of the University of Illinois said in a paper presented at the spring 1972 meeting of the Industrial Relations Research Association:

> One [of the two central wage policy issues that has emerged in these periods] is the appropriate tie between wages and living costs. . . . The War Labor Board rejected the cost of living tie, the 1946 Wage Stabilization Board ignored it, the Korean Board encouraged it, and the Nixon Board assumed it within specified limits.[7]

Perhaps because escalation was rare then, World War II control policies rejected it. The "Little Steel" formula permitted general wage increases to compensate for the rise in the CPI between January 1941 and May 1942. Beyond that, ties between wages and rising living costs were rejected: stabilization policy recognized only increases to correct for substandards of living or wage inequities, or to relieve manpower shortages. An Executive Order (9297), issued on February 14, 1946, directed the Wage Stabilization Board to approve wage increases designed to correct disparities between increases in wages and living costs between January 1941 and September 1945, but by 1946 stabilization was practically dead.

Wage regulations during the Korean period not only provided for cost-of-living catch-ups, but also permitted cost-of-living escalator adjustments during the control period. They also allowed wage increases to compensate for loss in purchasing power even in the absence of formal escalator clauses.

The wage guideposts of the Kennedy-Johnson years made no distinctions between contracts with and without cost-of-living escalation. The guideposts attempted to limit wage-rate increases to the long-term gain in productivity, with larger increases permitted only in substandard wages, where there were manpower shortages, or in

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[5] Minimum guaranteed escalator adjustments are provided in some contracts, but these are not true escalator adjustments and are not discussed in this article.

[6] The 26 cents was subsequently paid these workers under contracts negotiated in 1970.

[7] *Labor Law Journal*, August 1972, p. 461

agreements designed to provide unusual productivity increases. At first they implicitly assumed that guidepost policies would stabilize prices and therefore they made no exceptions for cost-of-living escalation. Then, at the beginning of 1967, after the rise in consumer prices began to accelerate, the Council of Economic Advisers explicitly stated that the wage guideposts should not be adjusted to recognize the recent increase in living costs. The Council expected many wage settlements in 1967 to exceed productivity increases but stated that:

> If on the average [wage settlements] should exceed [productivity] by the amount of the recent increase in living costs, price stability could never be restored.

It said that—

> arrangements which automatically tie wage rates to changes in consumer prices will contribute to inflation. . . . If all unions—and other groups in society—were to succeed in tying compensation to consumer prices, the arrangement would become a vast engine of inflation.[8]

During Phase II of the present economic stabilization policy, the Pay Board has assumed that prices would rise as much as unit labor costs and has made a limited distinction between wage increases resulting from negotiated wage changes and cost-of-living increases. In the computation of the maximum permissible pay increase, any cost-of-living escalator adjustment can be weighted by the proportion of the year during which it is effective, but similar weighting cannot be applied to increases that take place regardless of what happens to prices.[9] This provision does not increase the aggregate pay workers with escalation receive during the control year but it allows these workers to attain somewhat higher wage levels at the end of that year and, hence, to receive higher pay in subsequent years than they would achieve in the absence of escalation.

Under the Pay Board rulings it seems likely that wage rates of most workers under escalation will be no more than 1 to 1.5 percent higher at the end of the year than they would be if the union negotiated the full 5.5-percent maximum permissible increase at the beginning of the control year.[10] It seems unlikely that this policy will encourage widespread adoption of escalation unless it becomes clear that controls are likely to continue indefinitely (and, hence, the advantage of ending up each year with a somewhat higher increase than could be obtained otherwise would continue for a number of years), or unless prices are expected to continue to rise rapidly despite controls. In fact, relatively few cost-of-living escalator clauses have been adopted since Phase II began.

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[8] The Council of Economic Advisers, *Economic Report to the President, January 1967.*

[9] Economic Stabilization Regulations, 6 CFR 201.11(a)(4), 36 F.R. 25427, December 31, 1971.

[10] Assume that a union negotiates a 4.5-percent general wage increase plus a quarterly cost-of-living escalator clause and the Consumer Price Index rises at a rate of 3 percent a year—by 0.75 of a percent before the first quarterly adjustment, by another 0.75 of a percent before the second quarterly adjustment, and by another 0.75 of a percent before the third quarterly adjustment. At the end of the first quarter, wages could be increased 0.5625 percent (0.75 of a percent weighted by ¾ of a year). The additional 0.75 of a percent increase in prices at mid-year would be weighted by ½ and would add .375 of a percent to the total wage bill. Adding this to the basic 4.5 percent increase would bring the total increase to 5.4375. A third quarter adjustment of 0.75 percent weighted by a quarter would raise the annual wage bill by .1875 percent and would bring the total weighted wage increase to 5.6250 percent—in excess of the 5.5 percent permissible increase. Consequently, the workers could get only a third of this third quarter adjustment. The first two increases of 0.75 percent plus the third quarter increase of about 0.25 percent when added to the 4.5 percent increase effective at the beginning of the year would raise their wage rates to 6.25 percent above rates in existence at the end of the year—.75 percent higher than they would have been had they negotiated a 5.5-percent increase at the beginning of the year. If the union negotiated only a 4-percent general wage increase plus a quarterly cost-of-living escalator clause, prices would have to rise at a 4-percent annual rate to result in a weighted increase of 5.5 percent but their wage rates would be 7 percent rather than 5.5 percent higher at the beginning of the second contract year.

Economists' Views

Opinions of economists differ with respect to the inflationary potential of cost-of-living escalation. Some economists hold views that parallel those in the 1967 report of the Council of Economic Advisers quoted previously and conclude that wages will rise more rapidly with than without escalator clauses. Of these, some seem to argue that partial escalation is inflationary and still others that escalation is a problem only if it is widespread. In the late 1950's, J. W. Garbarino concluded that automatic wage adjustment systems (which consist of long-term contracts with both specified deferred and cost-of-living escalator adjustments) "probably add to the inflationary potential of wage policy (at least so long as they are partial in coverage)." He adds, however, that this observation "is limited to a relatively short span of years of high level prosperity during which many other and stronger forces have been in operation.[11] In the total picture, the specific *differential* impact of this wage setting system has not been a dominant factor." He also points out that in this country it was management that initiated automatic wage adjustments.

In an article published in April 1960, Jules Backman argued that cost-of-living escalators speed up wage increases and result in more frequent adjustments. He assumes, in other words, that annual wage adjustments negotiated in contracts without escalation do not anticipate price increases. His criticism of cost-of-living escalation is that it feeds inflation started by fiscal and monetary policies, not that it initiates inflation. He points out that the impact of escalation can be cut by reducing the frequency of adjustments, or by such devices as a minimum price increase necessary to trigger any adjustment, a ceiling on adjustments, and formulas for a proportionately smaller increase in wages than in the Consumer Price Index.[12]

Opponents of cost-of-living escalation argue that it does not increase the supply of goods and that if prices rise it is a signal that demand is outstripping the supply. They essentially assume that prices rise only when the supply of goods and services cannot be increased as rapidly as demand.

Other economists are less critical of escalator clauses. It is pointed out that escalation cannot be a primary cause of inflation because prices must rise first. William G. Bowen states that "Wage adjustments inspired by changes in the cost of living can reinforce and magnify initial increases in the price level, but cannot themselves initiate an inflationary spiral." [13] He points out that an increase in prices is likely to exert some upward pressure on wages even in the absence of a union. He also says that where escalator clauses exist "we can be quite sure that there will be a connection between changes in the cost of living and wages. . . . It must be remembered [however] that the absence of an escalator agreement in some contracts but not in other does not imply that changes in the cost of living are relevant for wage determination in the first case only."

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[11] "The Economic Significance of Automatic Wage Adjustments," published in Industrial Relations Research Association, *New Dimensions in Collective Bargaining*, 1959.

[12] Jules Backman, "Wage Escalation and Inflation," *Industrial and Labor Relations Review*. April 1960, pp. 398–410.

[13] *The Wage-Price Issue: A Theoretical Analysis*, Princeton University Press, 1960.

Ten years ago, Martin Brofenbrenner and F. D. Holzman pointed out that:

> If the escalated increases just substitute for wage increases that would otherwise have been attained, then the institutional arrangement itself cannot be considered to have contributed to (detracted from) the inflationary process. The impact of escalation . . . depends on the rate and frequency of adjustment and on the percentage of the labor force covered. If the total labor force were covered, and wages were escalated immediately and proportionately to changes in the CPI, a crucial stabilizing "lag" would be eliminated. . . . Typically, . . . the "lag" in wage adjustment is preserved at least in part. . . . In the United States, less than 5 million workers have at any one time been subject to wage-escalation agreements. . . . Statistical studies suggest that formal wage escalation has had no discernible influence on the speed of inflation in the United States. Not only are the number of covered workers very small, but wage increases in covered industries have not been greater than in noncovered industries.[14]

They stated that studies of British and Danish escalation suggest that "escalation in these countries serves primarily as a substitute for, rather than an addition to, other wage increases." [15]

In the Monthly Labor Review of January 1952, Faith Williams pointed out that:

> The economic effects of automatic wage-escalation clauses depend upon the periodicity of the adjustments, the degree of compensation afforded, [and] whether they are geared to downward as well as upward movements in the price index. . . .
>
> Lengthening the interval between wage adjustments, giving partial rather than full compensation for price increases, and establishing a definite lag between the price-index rise and the wage adjustments have been used at different times in different countries in efforts to retard inflation.

Some indeed argue that at least in periods of moderate inflation escalators may reduce the wage pressures on prices. It has been pointed out that wage demands in the absence of escalation include built-in expectations of a rise in the price level. These expectations may lead to larger wage increases than would result from escalation. The judgments that settlements negotiated in the absence of escalation may be larger than those that include an escalator clause take account of the fact that when the market for labor is not perfectly competitive there is no guarantee that settlements will be limited to the expected increase in productivity.

Milton Derber, in the article referred to previously, states:

> If, as a result of total economic stabilization program the cost of living can be restrained to acceptable levels, than recognition of the tie between wages and living costs serves a psychologically potent role. If, however, the inflationary pressures are not brought under control the tie merely fuels an inflationary sprial.[16]

The London Economist at one time suggested that an escalator that permitted wages to follow prices only after an interval and then by a smaller amount might help to check inflation. It would give the unions a sense of security and would thus reduce the pace of wage increases.[17]

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[14] "Survey of Inflation Theory," *American Economic Review*, September 1963, pp. 643-644.

[15] Except to the extent economists quoted have referred to it, this article does not discuss foreign experience with cost-of-living escalation. Escalator clauses have been used at various times in a number of European countries, including Belgium, Luxembourg, Denmark, Italy, Trieste, Norway, Sweden, and in some contracts in Great Britain. In Austria, Western Germany, and the Netherlands, fear of repeating the inflation of World War I prevented trade unions from demanding automatic escalation after World War II. Adjustments to rising prices were necessary even in those countries, however, often by frequent reopening of contracts.

[16] *Labor Law Journal*, August 1972, p. 461.

[17] *Economist*, November 24, 1951.

A recent article by Max Kossoris points out that:

> If wages were not escalated automatically there would be continued demands for higher wages as inflation made greater inroads into the purchasing power of wages. It has been argued that wage increases will take place inevitably during inflationary periods and escalation does not add to inflationary pressure. It merely establishes an automatic adjustment procedure which eliminates a serious source of friction and possible strikes; without an escalator, unions will demand reopening clauses or annual contracts that will result in wage increases at least as high as those achieved under the escalator. . . . In the absence of escalation, fear of future inflation may result in higher settlements based on excessively high estimates of future price trends.[18]

Whether or not escalation reduces or increases the size of wage adjustments, James Tobin points out that built-in resistance to downward adjustments in wages and prices make it necessary to raise wages and prices to induce shifts of resources. Therefore, some inflation is inevitable.[19] Universal application of escalation to wages and pensions would remove the inequity from mild inflation. "Measures to protect potential victims of inflation will sometimes lead to more inflation but the process is not explosive, and once the sting is removed from inflation, there is nothing wrong with having more of it."

Statistical Data

Such statistical evidence as there is on the effects of cost-of-living escalation seems inconclusive. It is difficult to distinguish the effects of cost-of-living escalation on the size of wage increases from the effects of differences in economic conditions, union strength, and other factors. To the extent that any conclusions can be drawn, the data certainly do not prove that cost-of-living escalation has contributed to inflation. Thus, tabulations of wage changes from 1941 to 1972 in a half dozen key collective bargaining situations show distinctly larger percentage increases in pay in the construction industry, where cost-of-living escalation has been practically nonexistent, than in the other situations, which, with one exception, had escalation for part or all of the period. Among the other industries compared, there appears to be relatively little difference that can be attributed to the existence of escalation; total wage increases have been somewhat greater for the situations that have had cost-of-living escalation throughout the whole period than for those that either did not have escalation at all or abandoned it for part of the period, but other factors besides the existence of escalation that have affected wages may explain the difference. The difference was less than 1 percentage point a year.

In 1970, 1971, and the first half of 1972, the average percentage increase in base pay (or pay and benefits) was distinctly larger in those settlements that did not incorporate escalation than in those that provided for cost-of-living adjustments. [20] The difference, which amounted to 2 to 3 percentage points a year, seems significant, since the industries with cost-of-living escalation tend to be those in which economic conditions and bargaining strength of the unions favor above

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[18] *Prices, Escalation, and Economic Stability* published by the Bureau of Labor Statistics in 1971, p. 28.

[19] Unemployment and Inflation: The Cruel Dilemma in Prices: *Issues in Theory, Practice, and Public Policy*, edited by Almarin Phillips and Oliver E. Williamson (1967).

[20] Base pay is used here to mean pay without escalator adjustments. A comparison of total changes in pay, including escalator adjustments, between all contracts with escalator clauses and those without such clauses for these years is not available.

average settlements. This difference did not appear in 1971 and 1972 for manufacturing industries considered separately, however.

Escalation in 1973

Next year—1973—will be a busy bargaining period. Major collective bargaining contracts for at least 4.1 million workers are subject to renegotiation during the year (compared with about 2.6 million in 1972). Many of the contracts expiring in 1973 have escalator clauses. Among them are the manufacture of electrical machinery, motor vehicles and farm equipment, and trucking. Some expiring contracts, notably in electrical manufacturing, do not provide for a cost-of-living review in 1973.

Conclusion

Assuming that prices do not rise at a runaway rate, there does not seem to be evidence that cost-of-living escalation is inflationary. Rather, there is a presumption that it leads unions to accept more reasonable settlements than if they felt they needed to include an inflation hedge.

Regardless of the assumptions as to whether escalation results in at least as rapid increases in wage rates as would occur in its absence, any policy decision about escalation or indeed the advisability of any policy decision to maintain real wages in a control period should consider whether the emergency will permit protection of workers' real wages. In some periods, such as a war time emergency in which resources must be diverted from consumer needs, all sectors of the economy except possibly those below the poverty line should presumably share the cost of this diversion.[21] The Council of Economic Advisers in its 1967 report also pointed out:

> That some part of the advance of consumer prices represents a transfer of income to public uses. . . . If every group attempted to offset the burden of . . . higher indirect taxes by a compensatory rise in money incomes, no transfer of real resources to public purposes could be achieved.[22]

Unless the emergency is such as to require drastic reductions in real income, however, control policies should probably recognize the fact that it is more difficult for the average worker to hedge against inflation than for those who obtain income from investment in equities.

If cost-of-living escalation is considered desirable, control policy must permit workers who adopt escalation to receive large enough increases in the event of rising prices to warrant their giving up part of the increase they could receive without escalation. Workers will probably not gamble on an escalator clause unless it gives them a chance of a significantly larger total increase in pay if prices rise than they could be guaranteed regardless of what happens to prices.

Any decision regarding escalation policy presumably should also consider the frequency of permissible adjustments. Theoretically, the less frequent the cost-of-living reviews, the less their inflationary potential. On the other hand, the less frequent the adjustments that are permitted, the less willing unions may be to adopt escalation, or at least the larger the initial guarantee they will expect.

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[21] See H. M. Douty, "Living Costs, Wages, and Wage Policy," *Monthly Labor Review*, June 1967.
[22] Council of Economic Advisers, *Economic Report to the President*, January 1967.

THE TRADE-OFF BETWEEN WAGES AND FRINGE BENEFITS UNDER CONTROLS

By CHARLES V. CICCONE*

This paper has two major premises. First, current wage stabilization policy must deal explicitly with fringe benefit expenditures which, in the aggregate, are exhibiting a long-range and persistent upward trend both as a proportion of employer labor costs and of total national income. Second, wage stabilization policy should be designed so that new benefit plans may be implemented and existing programs liberalized for lagging sectors of the labor force. While present stabilization policy takes these factors into consideration, the conclusions reached in this study indicate that a bulge in total compensation increases could be generated by present Pay Board *fringe benefit* policy in the coming year. Therefore, any plans to further liberalize employee benefit provisions of the present stabilization program should be carefully weighed by the Administration, the Pay Board and Congress.

Historical aggregate income data show that the ratio of fringes to wages has steadily increased over the past 24 years. (See Table 1.) However, while long-term trends in the Nation's wage bill are evident in these data, little is learned from aggregate figures about the shifts taking place within the package of fringe benefits or among the different sectors of the work force. Focusing on such shifts will add to the body of knowledge essential to an effective analysis of stabilization policy.

This paper first reviews the movements of aggregate wages and fringes since 1949 with particular attention to past wage control years. Moving to more current data, the paper explores the movements of the past several years among the several types of fringes in the total benefit package, especially changes among employee benefits for which liberalized control standards have been set under the Economic Stabilization Act Amendments of 1971. Finally, the interrelation between current wage control policy and the ratio of benefits to wages will be examined.

A major obstacle to meaningful analysis of employee benefit growth, and the impact Pay Board policy has on this growth, is the lack of a commonly accepted definition of employee benefits. In this paper, employee benefits will be referred to interchangeably as "supplements to wages," "fringe benefits," and "employee benefits." When national income data are used to discuss historical growth patterns, these figures refer to all payments made to employees including overtime, holiday and leave pay, shift differentials, production and nonproduction bonuses, and employer contributions for legally required social insurance programs.

*Congressional Research Service, Library of Congress.

A second obstacle is the different statistical procedures used by surveying agencies both in and out of government. While essentially measuring the same items, different computation methods produce varying results. For example, employee benefits expressed by BLS and the Department of Commerce as a percent of *total compensation* produces a measurement which is not strictly comparable with the same benefits expressed as a percent of *wages and salaries* alone.[1] To add to the confusion, the newest agency involved in measuring fringe benefit increases—the Pay Board—has its own statistical techniques. Bound by the statutory provisions of the Economic Stabilization Act to treat separately certain groups of fringe benefits, the Board calculates one combined percentage increase figure for wages, salaries and those benefits for which immediate costs are imposed on employers such as premium pay, paid leave, severance pay and nonproduction bonuses. Another increase figure is computed for benefits generating deferred incomes for employees such as private pension plans, insurance programs and savings plans.[2] The increase for each group is then measured as a percent of the applicant's existing base hourly compensation rate which includes wages and fringes but not legally required payroll deductions.

Because the principal focus of this discussion is Pay Board fringe benefit policy, the Bureau of Labor Statistics data of all nonlegally required expenditures by employers for fringes (leave, private benefit plans, and premium pay), arranged according to Pay Board classifications, have been resorted to. Tables 4 and 5 list the specific types of benefits under the categories used by the Pay Board.

Fringe Benefits: Boon and Burden

Ever since World War II, fringe benefits have undergone considerable change and rapid expansion and are now a large and important part of the Nation's total compensation package. Prior to 1935, however, the usual social burdens of life were shouldered almost solely by employees with little, if any, help from government or private employers. Planning personal economic security became an increasingly difficult task as the swings in business conditions became more volatile in the midst of a highly industrialized society. After passage of the National Labor Relations Act and the Social Security Act in 1935, employees were extended a modicum of protection against the hazards of old age and temporary unemployment. Spurred on by government leadership and employer practices during World War II when, under wartime wage controls employers were more willing to expand fringe benefits, unions began to give wage supplements higher priority in their negotiations with employers. In 1948 and 1949, the court's interpretations of the National Labor Relations Act that pensions, retirement, health and insurance plans were mandatory bargaining issues gave organized labor's quest for increases in privately provided protection plans added impetus.[3]

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[1] The latter procedure is used by the U.S. Chamber of Commerce in its biennial survey of employee benefits.

[2] The first group is referred to by the Pay Board as "includable" benefits while the second is called "qualified" benefits. These separate benefits are discussed more fully on pp. 349-350.

[3] Inland Steel v. NLRB, 1948, for pension and retirement plans, and W. W. Cross & Company v. NLRB, 1949, for health and insurance plans.

As time passed, more and more employers began to view workers' health, safety and economic welfare as a legitimate concern of the firm and were more willing to accede to the wishes of labor regarding benefits. To the extent that improved fringes relieved the clamor for wage increases and the health and overall well-being of workers improved productivity, employer resistance was reduced even further. Finally, with a growing share of the Nation's income going for benefits with no leveling off in sight, employers and policy-makers became concerned with the impact wage supplements have on wage costs and the economy in general.

Aggregate Trends in Wages and Fringe Benefits: 1949 to 1972

Using national income data, Tables 1 and 2 show the growth and change in the structure of total compensation for all employees for the past 24 years. Between 1949 and 1972, total compensation grew from 64.8 percent of national income to 75.7 percent. While total compensation expanded from $141 billion in 1949 to $697 billion in 1972, supplements to wages and salaries increased their share of total compensation from 4.6 percent ($6.5 billion) in 1949 to 11.1 percent ($77.8 billion) in 1972. Notice should be taken of the unique experiences of 1952 and 1964 in which supplements receded as a percent of total compensation—the first occuring during the 1950–1953 wage-price control period, and the other in the middle of the 1962–1966 voluntary

TABLE 1.—THE GROWTH AND CHANGING STRUCTURE OF TOTAL COMPENSATION 1949–72[1]

[Dollar amounts in billions]

Year	National income	Total compensation		Wages and salaries	Supplements to wages and salaries[2]	
		Amount	Percent of National Income		Amount	Percent of total compensation
1949	$217.5	$141.0	64.8	$134.5	$6.5	4.6
1950	241.1	154.6	64.1	146.8	7.8	5.0
1951	278.0	180.7	65.0	171.1	9.6	5.3
1952	291.4	195.3	67.0	185.1	10.2	5.2
1953	304.7	209.1	68.6	198.3	10.9	5.2
1954	303.1	208.0	68.6	196.5	11.5	5.5
1955	331.0	224.5	67.8	211.3	13.2	5.9
1956	350.8	243.1	69.2	227.8	15.2	6.2
1957	366.1	256.0	70.5	238.7	17.3	6.7
1958	367.8	257.8	70.0	239.9	17.9	6.9
1959	400.0	279.1	69.8	258.2	20.9	7.5
1960	414.5	294.2	71.0	270.8	23.4	7.9
1961	427.3	302.6	70.8	278.1	24.6	8.1
1962	457.7	323.6	70.7	296.1	27.5	8.5
1963	481.9	341.0	70.8	311.1	29.9	8.8
1964	518.1	365.7	70.6	333.7	32.0	8.7
1965	564.3	393.8	69.8	358.9	35.0	8.9
1966	620.6	435.5	70.2	394.5	41.0	9.4
1967	653.6	467.2	71.5	423.1	44.2	9.5
1968	711.1	514.6	72.4	464.9	49.7	9.6
1969	766.0	566.0	73.9	509.7	56.3	9.9
1970	798.6	603.8	75.6	541.9	61.9	10.2
1971	855.7	644.1	75.3	573.5	70.7	11.0
1972[1]	922.1	697.8	75.7	620.6	77.8	11.1

[1] 2d quarter, 1972, annual rate, seasonally adjusted.
[2] Employer contributions to social insurance, private pension plans, health-welfare funds, compensation for injuries, directors' fees, military leave pay, and other similar items.

Source: U.S. Department of Commerce, National income accounts.

TABLE 2.—NATIONAL INCOME, COMPENSATION TO ALL EMPLOYEES, AND SELECTED ECONOMIC INDICATORS, YEAR-TO-YEAR PERCENTAGE CHANGES, 1949–72[1]

Year	National income	Total compensation	Wages and salaries	Supplements to wages and salaries[2]	CPI, all items	Output per man-hour[3]	Compensation per man-hour
1949	−3.0	0	−.7	12.1	−1.0	3.2	2.9
1950	10.8	9.6	9.1	20.0	1.0	6.4	5.5
1951	15.3	16.9	16.5	23.0	7.9	2.0	8.7
1952	4.8	8.1	8.2	6.2	2.2	.9	5.5
1953	4.6	7.1	7.1	6.9	.7	2.9	5.6
1954	−.5	−.5	−.9	5.5	.5	2.3	3.2
1955	9.2	7.9	7.5	14.8	−.4	4.4	3.5
1956	6.0	8.3	7.8	15.1	1.5	−.5	5.8
1957	4.4	5.3	4.8	13.8	3.6	2.2	5.7
1958	.5	.7	.5	3.5	2.7	2.5	3.8
1959	8.7	8.3	7.6	1.9	.8	3.4	4.3
1960	3.6	5.4	4.9	12.0	1.6	1.3	4.1
1961	3.1	2.8	3.0	5.1	1.0	3.0	3.2
1962	7.1	6.9	6.5	11.8	1.1	4.5	4.0
1963	5.3	5.4	5.1	8.7	1.2	3.1	3.6
1964	7.5	7.2	7.3	7.0	1.3	3.7	4.7
1965	8.9	7.7	7.5	9.4	1.7	2.9	3.7
1966	10.1	10.6	9.9	17.1	2.8	3.5	6.1
1967	5.3	7.3	7.2	7.8	2.9	1.6	5.7
1968	10.3	10.1	9.9	12.4	4.2	2.9	7.3
1969	7.7	10.0	9.6	13.3	5.4	−.2	6.9
1970	4.2	6.7	6.3	9.9	5.9	.8	7.0
1971	7.1	6.7	5.8	14.2	4.3	3.4	6.9
1972[1]	7.7	8.3	8.1	10.0	[4] 3.0	6.2	[5] 5.6
1949–72[1]	323.9	394.9	361.0	1,096.9	75.8	85.6	218.1

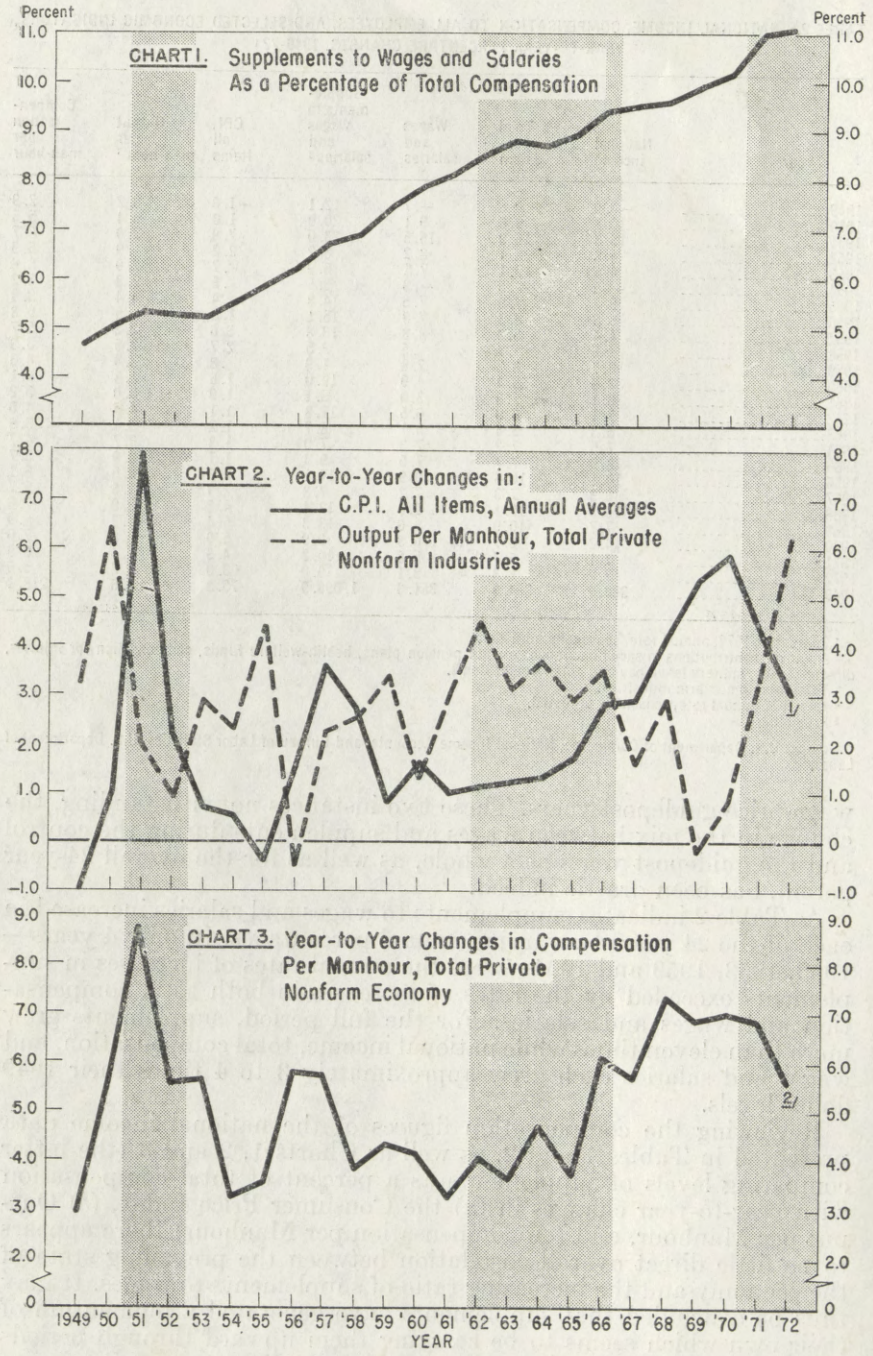
[1] 2d quarter 1972, annual rate, seasonally adjusted.
[2] Employer contributions to social insurance, private pension plans, health-welfare funds, compensation for injuries, directors' fees, military leave pay and other similar items.
[3] Total private nonfarm industries.
[4] July 1972 annual rate, seasonally adjusted.
[5] Preliminary.

Source: U.S. Department of Commerce, National Income Accounts, and Bureau of Labor Statistics, U.S. Department of Labor.

wage-price guidepost years. These two instances notwithstanding, the change in the mix between wages and supplements during the control and the guidepost years as a whole, as well as for the overall 24-year period, has been drastic indeed.

As Table 2 indicates, supplements to wages and salaries increased in each of the 24 years by varying annual percentages. In only 4 years—1952, 1953, 1959 and 1964—were the annual rates of increases in supplements exceeded by the rates of increases in both total compensation and wages and salaries. For the full period, supplements grew more than eleven times while national income, total compensation, and wages and salaries each grew approximately 3 to 4 times their 1949 dollar levels.

Reviewing the compensation figures of the national income data presented in Tables 1 and 2, as well as Charts 1, 2 and 3 (the latter comparing levels of supplements as a percent of total compensation with year-to-year changes in (*a*) the Consumer Price Index, (*b*) Output per Manhour, and (*c*) Compensation per Manhour) there appears to be little direct overall correlation between the prevailing state of the economy and the increasing ratio of supplements to wages. It may thus be concluded that supplements have generated a momentum of their own which seems to be carrying them upward through periods of expansion, recession, inflation and controls. Factors contributing to this thrust will be examined in this paper.



1/ '72 = July Annual Rate
2/ '72 = Second Quarter
3/ Shaded Areas = Economic Stabilization Years
Source: Chart 1, Table 1; Charts 2 and 3, Table 2

Although the expansion of wage supplements has been going on for a quarter of a century, a large portion of American workers are still not covered by most benefits. For example, in 1968, 45 percent of all workers in the total private nonfarm economy were in groups for whom no expenditures were made for retirement plans—one of the faster growing fringe benefits. In addition, benefit coverages vary widely from one industry division to another. Workers in trade and service industries in particular lag far behind others while employees in other segments of the workforce enjoy high levels of particular coverages. For instance, in mining four-fifths of the employees were in units for whom retirement expenditures were made in 1968. In construction, fringe benefits really began to spread as late as 1959. In that year supplements to wages constituted on the average only 2.25 percent of negotiated union rates. During more recent years, however, the rise in fringes in construction trades has been rapid, rising to seven percent of wages in 1968. Robert G. Rice's 1965 study shed considerable light on the issues involved in attempting to identify determinants of the historical growth of private wage supplements in America.[4]

Rice investigated, by simple and multiple regession analyses, the effects on the growth of supplements of (a) preferential tax treatment, (b) savings on group purchases, (c) avoiding manpower turnover, and (d) unionization. Examining each singularly and in combination with each other, Rice verified many of the conclusions reached by survey data. Essentially, his report suggests that the American progressive tax system and favorable tax laws applicable to some fringes, together with group purchase savings, has favored an increase in supplements in proportion to wage levels in individual firms. In essence, Rice's study shows that individual utility maximization is a significant factor in the movement of wage supplements as a percent of the total wage-fringe package.

Rice's findings combined with results of BLS surveys have been used as propositions upon which the analyses conducted in this paper were based. Essentially these are: (a) the larger the firm, the greater the benefit expenditures relative to wages; (b) the higher the level of earnings, the higher the ratio of benefits to wages; and (c) the greater the degree of unionization, the higher the proportion of compensation devoted to fringes and certain types of benefits.

The Lessons of 1950–1953

During the early part of the 1950–1953 wage-price control period, a "cost-package" approach was initially taken by the Wage Stabilization Board. Under this procedure, a common standard was set for *all* compensation increases. Accordingly, wages, salaries and all other forms of compensation could be increased if the total increase did not exceed 10 percent of the firm's compensation level in effect during the payroll period nearest January 15, 1950. Fringe benefit increases therefore could be granted only if they were charged off against the 10 percent standard.

In June 1951, the "cost-package" approach was replaced by an "area-industry practices" concept. This meant that, after the middle

[4] Robert G. Rice, "Skill, Earnings and the Growth of Wage Supplements," American Economic Review, May 1966.

of 1951, five major fringe benefits (vacations, holidays, shift differentials, overtime and call-in pay) were to be ruled on by the Board according to the level of similar fringes prevailing in the appropriate industry or area. No longer could fringe benefit costs be offset against the general 10 percent standard. After considerable confusion developed over what should be done about other types of fringes, the area-industry practices criterion was extended to *all* fringes with some exceptions made for those imposing "minor costs," those "unique to the firm," or those generally held to be "not unstabilizing." In the absence of specific definitions, fringe policy was naturally prone to conflict. When the issues were left largely unresolved by the Board, decisions were made more on a case-by-case basis rather than on the basis of established policy.[5]

The historical report issued by the Wage Stabilization Board emphasized the limitations of its statistics both for fringes and for wages. Primarily, the limitations were based on the fact that decisions made by the Board applied to entire cases and not just to specific fringe issues. Thus, while approval rates for fringes were included in the Report, separate cost data for wages and fringes were omitted. This apparent shortcoming of the Board's operation did little to ameliorate the long-standing controversy (even at that point in time) over the impact growing fringe benefits were having on the economy. Hindsight provided by the 1950–1953 experience, plus the current availability of more sophisticated computer hardware and programming techniques, should have influenced the choice of processing and analytical procedures used by the present Pay Board.

The 1962–1966 Voluntary Wage-Price Guidepost Program

During the years 1962 through 1966, the voluntary wage and price guidelines policies of course had far less impact on fringes than the policies of the 1950–1953 period. Although President Kennedy included fringe benefits in his announcement of the general guideposts for wages,[6] no further policy was enunciated on this issue. In effect then, while compensation per man-hour remained generally in line with productivity, and price increases during most of these years were small, industry leaders and labor representatives were free to change the mix of wages and fringes in the total compensation structure. National income data for 1962 through 1966 show that, in the aggregate, labor and management did in fact change the proportion. As total national income increased strongly in the 1962–1965 period, total compensation retained its proportionate share of all income generated by the economy. However, in these same years, wages and salaries declined as a percent of total compensation while supplements grew from 8.5 percent in 1962 to 9.4 percent in 1966.

Wage and Benefit Policy Under Phase II

Under Phase II control policy, the Pay Board processes applications for wage and benefit increases by using the "sum-of-the-per-

[5] See "Wage Stabilization Program 5950–1953," Volumes I, II, Wage Stabilization Board, Economic Stabilization Agency, June 30, 1953, for a detailed history of the program. Also, a concise but highly informative summary of controls and fringes during this period is Gertrude G. Schroeder's "The Stabilization of Fringes under the 1951–1953 Wage Control Program" in The Southern Economic Journal, January 1955.

[6] Economic Report of the President, 1962.

centages" method of computation (except for cost-of-living escalator clauses). Under this method, base hourly compensation is established for the base period. Base hourly compensation, as computed by Board rules, includes wages and salaries, "includable" fringe benefit costs, and "qualified" fringe benefit costs but it excludes all legally required payments such as those made by employers for social security, railroad retirement, unemployment, workmen's compensation programs and others. In addition, any increases in payments made by employers to fund existing levels of "qualified" benefits are not counted as part of wage increases.[7]

Requested wage and benefit increases are separated into two categories; (1) wages, salaries and "includable" benefits, and (2) "qualified" benefits.

The combined wage and "includable" benefit increase is computed as a weighted (by the number of employees affected) percentage of the base compensation rate and is subject to the 5.5 percent general wage standard. This rule leaves little room for shifts from wages to "includable" benefits. However, the "qualified" benefit increase is separately computed as a percentage of the base rate and it is subject to three special liberalizing standards especially established for such benefits thus making the possibility for trade-offs between wages and "qualified" benefits much greater. Consequently, this paper will concentrate on the movements between the sum of wages and "includables" on the one hand and "qualified" benefits on the other.

The distinction made by the Board between types of benefits relates to its overall approach to fringe benefit policy—a policy established by legislative action which liberalized increases for "qualified" benefits. In the Economic Stabilization Act Amendments of 1971, Congress imposed on the President a requirement to give special consideration to certain forms of employee benefits.[8] While the Act granted the President overall authority to control wages and salaries including "any insurance and other fringe benefits," Section 203(g) specifically excluded from wage controls increases in employer contributions to (a) any pension, profit sharing or annuity and savings plan meeting certain stated requirements of the Internal Revenue Code,[9] (b) any group insurance plan, and (c) any disability and health plan. However, in order to avoid the creation of an open-ended exemption a "coda" was added to this section of the law. According to the Act, "qualified" benefit increases were to be limited by a judgment to be made by the President that such contributions are not "unreasonably inconsistent with the standards for wages, salary, and price increases" issued under the Act.

Interpreting this provision of the law as a Congressional mandate to limit increases allowed under the "qualified" benefits exemption, the Pay Board, on February 23, 1972 (more than three months after the start of Phase II), set three additional "qualified" benefit standards.[10] In the first of these, the Board ruled that a 0.7 percent increase

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[7] Because the Pay Board receives reports of wage and benefit *increases* only, and only from Category I and II units, a large majority of pay and benefit decisions are not subject to the Board's statistical input nor its scrutiny. Also, while the construction industry is generally covered by the same standards, unionized construction cases of firms of any size are reported to and acted on by the Construction Industry Stabilization Committee.

[8] Public Law 92-210, December 22, 1971, Section 203 (g).

[9] Sections 401(a), 403(b) and 404(a)(2), Internal Revenue Code of 1954. Generally, unfunded or pay-as-you-go plans are not included in "qualified" benefits.

[10] Pay Board Regulations, Section 201.58(d), "Qualified Benefit Plans."

in employer contributions for new or improved "qualified" benefits would not be unreasonably inconsistent with the goals of the stabilization program. In effect then, the general wage standard was raised from 5.5 percent to a basic 6.2 percent for a combined wage-fringe package. The 6.2 percent increase level for the package is therefore applied to any request for increases, without special qualifications, as long as the additional 0.7 percent is for those fringes listed under the "qualified" benefits provisions of Section 203(g).

Realizing that the 0.7 percent standard might inhibit the implementation of new plans or the liberalization of existing ones among workers for whom such benefits are lagging, the Board made two exceptions to the basic 0.7 standard. In the first, a "catch-up" 1.5 percent increase standard applies to those employees whose "qualified" benefits have increased less than one-half percent over the last three years. In these cases the differences between the total percentage received for the three years and 1.5 percent can be added to the 0.7-percent basic benefit increase. Thus, under this exception, it is possible for a wage-fringe package increase to be as high as 7.7 percent in any one control year.[11]

The second exception is an option that may be taken by employers instead of the .7 percent basic or the 1.5 percent "catch-up" standards. In this exception, a requesting unit may apply up to an additional 5 percent increase for new or improved "qualified" benefits if these benefits comprise less than 10 percent of the unit's total base compensation. The allowable increase for a qualifying unit, according to the exception, would then be the difference between what its level of "qualified" benefits is and the 10 percent limit, subject to a maximum one-time increase of 5 percent (until the 10 percent level is attained). In cases where the full 5 percent is allowed, the wage-fringe package can be the total of 5.5 percent under the general wage standard plus 5.0 percent in "qualified fringes" granted under this exception.

Moreover, the Pay Board's definition of the "first control year" demonstrates an additional liberal aspect of wage-fringe policy even though its impact on fringe escalation may be minimal. When the anniversary date of a union-bargained contract falls prior to November 14, 1972, the first *control* year can be less than 12 months. Therefore, it is possible for some unionized firms to apply for two increases in one *calendar* year. However, because it is highly unlikely for a unionized firm to have a level of "qualified" benefits much less than 10 percent of total compensation (other than perhaps recently organized firms), the maximum allowable increase of slightly more than 21 percent in combined wages and benefits in one calendar year under this rule is rarely if ever approached.[12]

On the other hand, employers exempted from controls and nonreporting firms, believing these policies to be within the Board's standards, may grant similar increases without notifying the Board. Consequently, the total impact these and other possibilities for above-standard package increases have on the level of wages throughout the economy during the control period will not be known for some time.

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[11] In this example, as in all others cited, other possible wage increases exceeding the 5.5 percent general wage standard have not been considered.

[12] In the hypothetical unionized firm with no "qualified" benefits at all, the 5.5 percent general wage increase plus the maximum 5 percent "qualified" benefit increase could be applied for in two consecutive short control years but in the same calendar year. Compounded, these two increases would result in a one calendar year wage-benefit raise of more than 21 percent.

BLS does report average increases in negotiated contracts for wages and benefits, but these are for large unionized firms only. In addition, BLS computing procedures differ from those of the Pay Board which makes comparisons of data published by each agency difficult, at best.

An important facet of employee benefit control policy is its relationship to the rate of inflation in the economy. Employer expenditures for wage supplements can be viewed from several perspectives. First, some employee fringes benefit the employer as well as the worker. Vacations, rest periods, health care and improved worker morale generated by a generous fringe package can pay off in lower absenteeism, higher company loyality, lower turnover and generally greater overall operating efficiency. To the extent that output per manhour of work increases, the employer shares in the benefits of the fringe package.

Second, all employee benefits do not always place immediate additional funds in the pockets of workers. For example retirement, pension, health and life insurance, thrift and savings plans are *deferred-income* generating fringe benefits.[13] While funding these plans imposes a cost on the employer and therefore affects product pricing, it does not ordinarily increase the worker's present purchasing power. On the other hand, direct income-producing benefits such as overtime and other premium pay rates and pay for work not performed (e.g. vacation bonuses, additional vacation days, holidays, sick leave and other personal and civic leave) impose a greater cost on employers with little immediate returns in increased productivity.[14] In these cases employer expenditures have a two-pronged effect on the economy: (1) they increase labor costs leading to possible increases in product prices; and, (2) they increase workers' incomes leading to possible increases in consumption expenditures. To the extent that a worker's personal outlays for coverages provided by the benefit package are reduced, or he sees a lesser need to save, his consumption expenditures may increase. The extra leisure time provided by the package may also cause additional worker expenditures and add to overall consumer demand.

During periods of wage-price control, the additional costs of deferred-income ("qualified") benefits will normally have a lesser impact on prices than direct income-producing benefits ("includables"). However, any massive shift to the former made possible by a loosely enforced more liberal standard could cause total compensation increases to exceed stabilization plan targets.

Several points regarding current wage-fringe policy are worth noting. The first deals with the basis upon which the three levels of "qualified" benefit standards were determined. Setting the "unreasonably inconsistent" standards on "qualified" benefits was based on the rationale that expeditures for fringes, as do those for wages and salaries, have a direct impact on costs and therefore, an upper limit for increases should be set to prevent total compensation levels from skyrocketing. However, any statistical justification for the numerical level of the 0.7-percent basic fringe standard was hard to come by.

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[13] These are benefits treated more liberally by the Pay Board in present wage control policy under the "qualified" benefit standards.

[14] As noted above, effects of improved worker morale and well-being may add to individual output but this must be measured against a smaller manhour worked total.

Because the standards were set while the Board was still tripartite (and therefore required the approval of Labor members), they could have been arrived at as a compromise figure after several in-house bargaining sessions among all Board members.

On the other hand, the 10-percent maximum "qualified" benefits limit was predicated on what was taken by the Board to be the average prevailing rate for these fringes in the total economy. The Board relied on existing employees benefit survey data, particularly figures collected and reported by the United States Chamber of Commerce in its latest biennial survey.[15]

Another point is that the 0.7 percent "qualified" benefit standard is cumulative and, to the extent that all or part is not utilized in one control year the unused portion may be added to the 0.7 percent allowed in the next control year. In addition, a further shift to benefits is made possible by a Pay Board rule which allows an employer to apply any unused portion of the 5.5 percent general wage increase to further increase "qualified" benefits.

On the other hand, wherever relative values for fringe benefits must be maintained, cost increases for these benefits rise automatically when wages go up. Raw survey data showing increases in costs for wage-tied benefits may be misinterpreted as shifts to fringes. The Board does not charge these increases against the standards. Under present procedures, the Pay Board applies a factor for smaller firms which discounts the roll-up or secondary effects of changes in wage rates on "included" benefits but not for "qualified" benefits. For these latter fringes, the Board applies another factor to adjust upward the BLS data so that averages applied against general wage standards will be more representative.

Because the population of workers under the direct jurisdiction of the Pay Board has been substantially limited by statutory exemptions and Cost of Living Council policy, the impact Pay Board policy has on total fringe benefit growth throughout the economy may be difficult to determine—at least in the shortrun. First, the low-wage exemption provision of the Economic Stabilization Act caused the Cost of Living Council to exclude from wage controls all workers earning less than $2.75 per hour.[16] Second, in May 1972 about 5 million small firms employing a total of approximately 19 million workers were exempted from controls by the Council. Together, these two exemptions released from controls approximately 35 million workers.

The low-wage and small business exemptions, and the nonreporting rules for Tier II firms (those with less than 1,000 employees) removed from the Pay Board's statistical pipeline pay and fringe information affecting more than three-quarters of all employees in the United States. Yet employee benefit data clearly show that room for fringe benefit improvement is larger among the lower-paid employees of nonunionized, smaller sized establishments.

The rationale behind this policy is the belief that wages and fringes for these employees do not move except in response to movements of the larger, unionized, more concentrated industries in the economy,

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[15] Chamber of Commerce of the United States. Employee Benefits 1971. Washington, D.C. 1972. Although considerable differences exist in the computation procedures used by the Chamber, by the Bureau of Labor Statistics and by the Pay Board, the Chamber's data were used as a guide in this determination.

[16] The original level announced by the Cost of Living Council was $1.90 per hour. In response to a U.S. District Court ruling (Jennings v. Connally, USDC District of Columbia, 1972), the Council raised the exemption figure to $2.75 in July 1972.

and therefore, their control imposed an unnecessary administrative burden on the Pay Board. However, even if smaller firms follow Phase II standards on *wages*, they may be less inclined to do so with regard to *fringes*. Considering the fact that generally, lower paid employees in smaller firms are also less likely to be unionized, an increase in wages and benefits for these workers—and any shifts from one to the other—is more an employer option influenced to varying degrees by a combination of general economic conditions, prevailing industry and area practices, and the degree of competition in the local labor market. While these forces play a major role in setting wage rates, their impact on fringe benefit decisions may be the reverse. That is, when conditions are such that wage rates cannot be moved upward easily, a conscious shift to less visible, less immediate, and perhaps less expensive fringe benefits may result. Because of this and other factors (e.g., worker incomes generated by benefit programs are nontaxable and employer expenditures for fringes also receive favorable tax treatment), both employee and employer preferences in such situations may coincide. On the other hand, employee preferences, especially among lower-paid, less organized workers in smaller firms, are likely to lean toward immediate wage increases rather than fringe benefits at least until their economic conditions improve. However, the extent to which they can effectuate their wishes, in the absence of market clout, is limited at best. If the economic stabilization program is to be based on control of concentrated industries and large unionized sectors of the labor force only, then, at least where fringes are concerned, policy makers ought to seriously consider the proposition that, without compulsion, followers follow leaders only when followers are being led in the direction they want to go.

The effect legally-required social insurance programs have on the interpretation of changes in private employee benefit programs should also be considered. Although the expansion of legally-required social insurance plans may inhibit the growth of some fringes (especially among lower and middle-income earners), aggregate benefit data for the past several years do not indicate a slow-up in the general growth of non-legally required benefits. In Table 3, national income data for the period 1967 to 1972 for which legally-required social insurance payments have been deducted, still show a steady increase in the proportion of supplements to total compensation. Whether this trend will continue, particularly among lower-paid workers, is uncertain. First, with changes both in the taxable base and contribution rates for social security coverage, increases in payroll deductions were greater for workers at the lower end of the wage scale. Recently enacted legislation imposing still higher future taxable base levels and contribution rates will cause payroll deductions to continue to increase. Under these conditions employees in lower pay levels may feel adequately covered relative to their incomes and may not see a trade-off of wage increases for benefits as being in their immediate best interest. To the extent that private plans are contributory (requiring still further payroll deductions), resistance to such programs among this group intensifies. Again, how much power these workers can exert in the labor-management negotiating arena will ultimately determine the rate of change in the growth of their wages and fringes.

TABLE 3.—SUPPLEMENTS TO WAGES AND SALARIES, NATIONAL INCOME ACCOUNTS, 1967–72[1]

Year	All Supplements[2]			Supplements less employer contributions to social insurance		
	Year to year changes (percent)	Percent of national income	Percent of total compensation	Year to year changes (percent)	Percent of national income	Percent of total compensation
1967	7.8	6.8	9.5	9.7	3.5	4.8
1968	12.4	7.0	9.6	11.4	3.5	4.9
1969	13.3	7.3	9.9	11.1	3.7	5.0
1970	9.9	7.7	10.2	14.6	4.0	5.3
1971	14.2	8.3	11.0	13.7	4.3	5.7
1972[1]	10.0	8.4	11.1	8.7	4.3	5.7

[1] 2nd quarter 1972, annual rate, seasonally adjusted.
[2] Employer contributions to social insurance and to private pension plans, health, welfare funds, compensation for injuries, director's fees, military leave pay and other items.

Source: U.S. Department of Commerce, National Income Account.

Wage-Fringe Movements During Pre-Phase II Period

In assessing the impact Pay Board policy has had on the fringe-wage ratio, movements among fringes for several fairly recent years leading up to the control program should be examined. Table 4 shows Bureau of Labor Statistics total compensation and employee benefit data for the total private nonfarm economy for the years 1966, 1968 and 1970. For purposes of this analysis and to enable comparisons with present Pay Board procedures and policies, the data have been arranged according to the Board's classification of benefits (i.e., "qualified" benefits and "includable" benefits).

TABLE 4.—TOTAL COMPENSATION AND EMPLOYEE BENEFITS, ALL EMPLOYEES, ALL INDUSTRIES, PRIVATE NONFARM ECONOMY, 1966, 1968, AND 1970

[BLS data rearranged according to pay board classifications]

	1966	1968	1970
I. Total compensation in dollars per hour worked	$3.40	$3.89	$4.54
II. Employee benefits (as a percent of total compensation)			
A. Qualified benefits:			
1. Private pension plans[1]	2.5	2.7	3.0
2. Life, accident and health insurance plans	2.1	2.2	2.6
3. Savings and thrift plans	.1	.2	.2
Total, qualified benefits	4.7	5.1	5.8
B. Includable benefits:			
1. Shift differential	.3	.3	.3
2. Overtime and other premium pay	2.1	2.1	1.7
3. Holidays	1.9	2.0	2.1
4. Vacations	3.1	3.1	3.3
5. Civic and personal leave	.1	.1	.1
6. Vacation and holiday funds	.1	.1	.1
7. Sick leave	.5	.6	.7
8. Severance pay	(2)	.1	.1
9. Severance pay and subsistence	(2)	(2)	(2)
10. Nonproduction bonuses	1.2	1.0	.9
Total, "includable" benefits	9.3	9.4	9.3
Total qualified and includable	14.0	14.5	15.1

[1] Includes data for qualified profit-sharing plans.
[2] Less than 0.05 percent.

Source: Department of Labor, Bureau of Labor Statistics, biennial surveys, employee compensation in the private nonfarm economy.

For the 1966–1970 period, "includable" benefits have maintained a rather steady proportion of total compensation both as a whole (9.3 percent) and individually, with only small advances registered in "vacations" and "holidays."

Table 4 also shows that "qualified" benefits increased as a percent of total compensation in each of the three survey years shown, rising from 4.7 percent of an average $3.40 per hour total compensation rate in 1966 to 5.8 percent of a $4.54 average total compensation rate in 1970. Clearly, the growth of "qualified" benefits outpaced the expansion in other benefits since 1966 with large gains made in pensions and insurance plans and little change in savings and thrift plans. Charts 4 and 5 show these rates of growth in graph form.

Table 5 deals with the growth of benefits for the same years in the unionized sector and nonunionized sector. In this table, Bureau of Labor Statistics benefit survey data for nonoffice employees in union and nonunion establishments in the private nonfarm economy are also broken down according to Pay Board benefit classifications. The figures show that benefits in both categories were higher for unionized establishments, and the rate of growth between each two-year period was also faster for unionized workers. In addition, the same finding for the total private nonfarm economy regarding the whole package of "includables" applied to both the union and nonunion establishments—that is, most "includables" remained at a fairly constant proportion of total compensation in each of the three survey years (with actually a small *decrease* registered in the total "includable" package between 1968 and 1970.)

As for "qualified" benefits, these increased their share of total compensation among unionized establishments at an even faster rate than they did in the total private nonfarm economy.

The evidence presented in the 1966, 1968 and 1970 Bureau of Labor Statistics survey data indicates that the more recent trend in the shifting proportion of benefits to wages appears to be comparable to the one observed in the national income accounts for the overall 24 year period between 1949 and 1972.

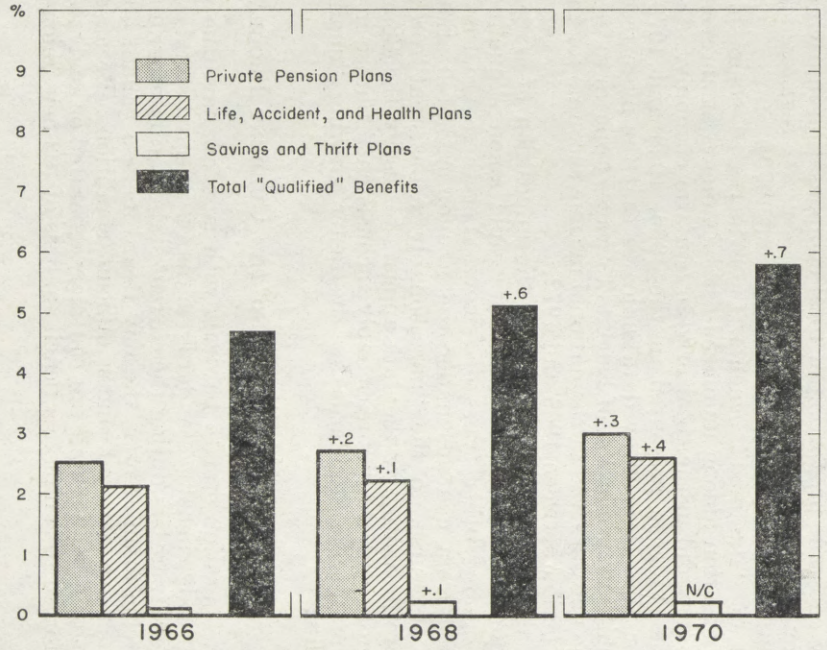
It also appears that, prior to the imposition of wage controls in November 1971, growth was more rapid among "qualified" benefits than among other types of fringes. Yet these are the benefits exempted from controls under the Economic Stabilization Act (subject, of course, to the "unreasonably inconsistent" provision). The picture presented by the data appears to justify the Board's decision to implement the "unreasonably inconsistent" phrase in the Act by setting specific standards for the faster growing "qualified" fringe benefits.

Fringe Benefits and the Current Program

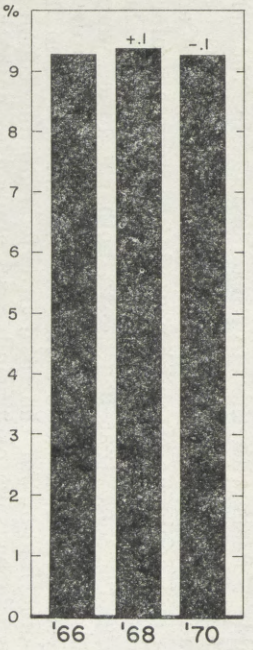
The question still to be dealt with is: How have the more liberal "qualified" benefit standards actually affected total wage-benefit package increases during the current stabilization program? Searching for a clue to an answer, the Pay Board made a valiant but somewhat inconclusive attempt under difficult conditions. Because wage and fringe benefit data were not routinely separated or analyzed, the Board was forced to complete a pencil analysis of 103 new union-closed cases

CHART 4

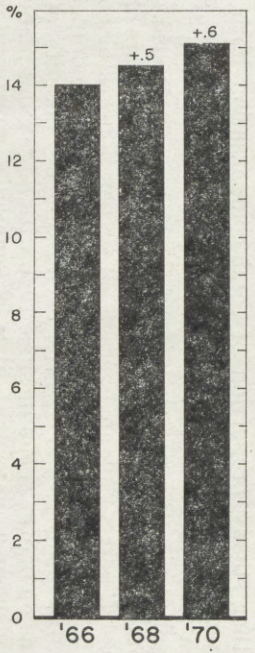
"QUALIFIED" BENEFITS AS A PERCENTAGE OF TOTAL COMPENSATION
(DOLLARS PER HOUR WORKED)



"INCLUDABLE" BENEFITS AS A PERCENTAGE OF TOTAL COMPENSATION

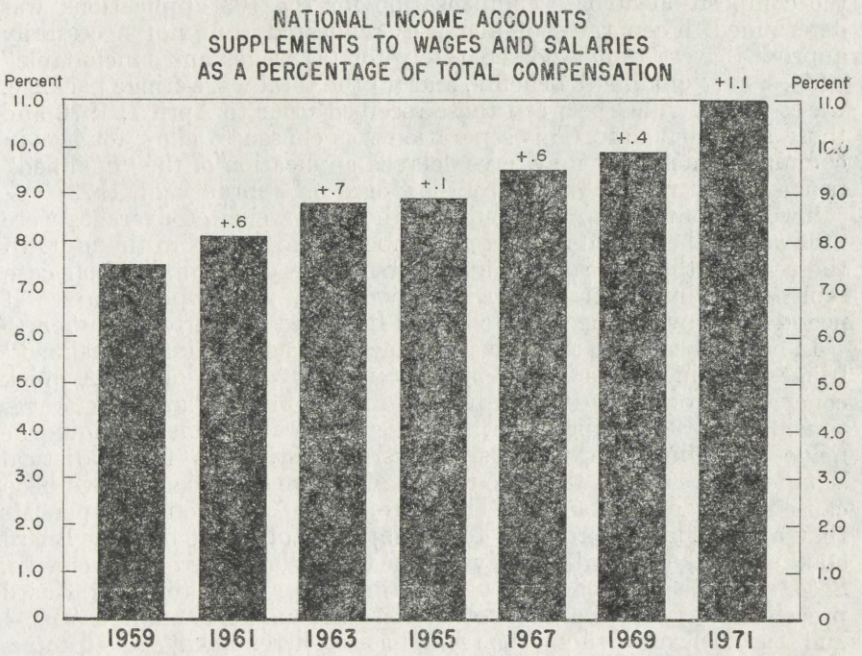


"QUALIFIED" + "INCLUDABLE" AS A PERCENTAGE OF TOTAL COMPENSATION



Source: Table 4

CHART 5



Source: Table 1

TABLE 5.—TOTAL COMPENSATION AND EMPLOYEE BENEFITS, UNION AND NONUNION ESTABLISHMENTS, NONOFFICE EMPLOYEE COMPENSATION, PRIVATE NONFARM ECONOMY, 1966, 1968, AND 1970

[BLS data rearranged according to pay board classifications]

	Union			Nonunion		
	1966	1968	1970	1966	1968	1970
I. Total compensation in dollars per hour worked	$3.61	$4.21	$4.86	$2.32	$2.69	$3.08
II. Employee benefits (as a percent of total compensation):						
A. Qualified benefits:						
1. Private pension plans[1]	2.8	3.1	3.4	1.2	1.2	1.4
2. Life, accident and health insurance plans	3.0	3.3	3.9	1.3	1.2	1.6
3. Savings and thrift plans	.1	.1	.1	(2)	(2)	.1
Total qualified benefits	5.9	6.5	7.4	2.5	2.4	3.1
B. Includable benefits:						
1. Shift differential	.7	.7	.6	.2	.2	.2
2. Overtime and other premium pay	3.5	3.4	3.0	2.3	2.3	2.0
3. Holidays	1.9	2.0	2.0	1.3	1.4	1.5
4. Vacations	3.3	3.3	3.4	2.0	2.1	2.2
5. Civic and personal leave	.1	.1	.1	(2)	.1	.1
6. Vacation and holiday funds	.3	.3	.2	(2)	(2)	(2)
7. Sick leave	.3	.4	.4	.3	.4	.5
8. Severance pay	(2)	(2)	.1	(2)	(2)	(2)
9. Severance pay and subsistence	.1	.1	.1	(2)	(2)	(2)
10. Nonproduction bonuses	.3	.3	.2	1.0	.7	.6
Total, includable benefits	10.5	10.6	10.1	7.1	7.2	7.1
C. Total, qualified and includable benefits	16.4	17.1	17.5	9.6	9.6	10.2

[1] Includes data for qualified profit-sharing plans.
[2] Less than 00.5 percent.

Source: Department of Labor, Bureau of Labor Statistics, biennial surveys, employee compensation in the private nonfarm economy.

in Categories I and II received up to August 1, 1972. In the analysis, the composition of base compensation for the 103 applications was determined. Then rates of increases requested (but not necessarily approved) were tabulated separately for (a) wages and "includable" fringes, (b) "qualified" benefits, and (c) the total wage-fringe package. Cases were divided between those received prior to April 1, 1972 and those after that date. This separation was chosen to allow for lags in communications that may have delayed application of the "qualified" fringe benefit rule published by the Board on February 23, 1972.

Two computations were made. In the first, weighted averages were used where the weights were the number of employees in the unit. In the second, the more meaningful perspective of the individual case represented by simple unweighted averages, was applied to see if negotiations over fringes had changed from one period to the other.

In both procedures, the percentage increase requested for "qualified" fringes rose in the period *after* the standards were adopted. A quick conclusion would be that shifts were in fact being made from wages to fringes under the program. However, several comments should be made regarding the Board's analysis. First, tests for statistical significance disclosed that the results of the analysis could have been caused by random factors. Therefore, while suspicion still persists that a real shift from wages to benefits is motivated by Pay Board standards, the Board's analysis must be considered inconclusive. Second, the point made earlier in this paper that the Pay Board processes only applications for increases from nonexempted Tier I and Tier II firms [17] should be reemphasized here. Taking this into account, the number of cases analyzed in the study were relatively small, involving only 246,019 workers in the pre-April 1 group, and 155,051 in the post-April 1 tabulations. Also, the figures refer to incremental increases measured on the firm's existing base benefit levels at the time. Thus, how much of the actual economywide situation is reflected in the results obtained in so small a sample, regardless of confidence degrees, is highly questionable.

The fact that little separate benefit and wage data have been recorded for convenient retrieval and more complete analysis indicates that the lessons of the 1950–1953 Wage Stabilization Board experience regarding data collection and processing were largely ignored. This deficiency can be understood considering workload, staffing problems and higher Board priorities. Nevertheless, the concern of the Board has generated plans for computerizing all wage and benefit data on a dollar-and-cents basis which will eventually facilitate separate processing and analysis of both wage and benefit movements. One would hope the new statistical procedure will come soon enough to affect future decision-making in the application of wage-fringe controls.

Conclusions and Some Projections

Short of the availability of convincing statistical evidence confirming the belief that trade-offs between wages and benefits are encouraged by present Pay Board policy and thus a potential exists

[17] Firms in this grouping not granting increases or reducing wages and benefits, if such is the case, are not heard from and therefore, are not part of the Board's statistical workup.

for total compensation increases to go beyond general wage standards, the following conclusions can be drawn from the findings of this paper:

a. There is a long history of a continuously rising fringe-wage ratio which seems to respond more to individual (employee and employer) desires than overall economic forces with added thrust supplied by favorable tax policies, group-selling practices, and unionization.

b. "Qualified" benefits for which a special approach was enacted to liberalize increases have a long history of growth and expansion within the total fringe package. While increases in these deferred-income generating benefits are normally less inflationary than others, they still impose an immediate cost on employers and to that extent they will be reflected in market prices; any large shifts to "qualified" benefits motivated by a loosely administered liberal set of standards can cause wage stabilization targets to be missed.

c. Exemptions and nonreporting policies have substantially reduced the inflow of wage and benefit increase data to the Pay Board, thereby reducing the reliability of short-term fringe benefit analysis.

d. Lower-paid workers, in smaller, nonunionized firms lag as a whole in fringe benefit coverage. Exempted from wage and fringe controls, their employers may push fringe increases rather than wage increases especially if money wage raises are difficult to come by; because they are either exempted or nonreporting, wage-benefit decisions among these workers are not immediately known to the Board.

e. Wage and fringe controls for concentrated industries alone may be a less effective pattern-setting technique to hold economy-wide fringe increases in line than it would be to limit increases in wages more generally.

f. Recently enacted social security legislation increasing benefits and payroll deduction may moderate benefit growth in the future among some sectors of the labor market; to date, however, no such moderation is evident.

The findings of this study suggest a variety of possibilities for short-term movements in fringe benefits under an extended period of controls imposing the same or similar standards as the present program.

Under any circumstances, a certain rate of growth in fringe benefits will normally be registered in response to the momentum generated by past trends and the usual employee desires to maximize total compensation increases. However, a shift in emphasis from wage to benefit increases beyond the normal level could develop among labor negotiators and workers in general. In this context, three national economic indicators will play a major role: (1) price inflation measured by the Consumer Price Index; (2) worker productivity measured by output per manhour worked; and (3) corporate profits after taxes. Considering only the more obvious possibilities, the following picture emerges.

If prices under Phase III climb only moderately, then demands for wage increase could stay within the basic wage standards with only normal demands made for a better fringe package. However, should

a *large* climb in CPI be registered under Phase III, then the lid on wages imposed by controls will cause workers to seek *major* gains in fringes to supplement their money wage increases. If, in addition to substantially rising prices, corporate profits maintain their present high levels and output per manhour also stays high, then pressure for large fringe package increases will be even more severe.

Thus, wherever possibilities exist to go beyond basic standards they will not be overlooked. Under these conditions, the liberal "qualified" benefit standards could be viewed as the "hole in the dike" through which labor will try to push average total compensation increases beyond stabilization targets. In summary, should price controls be only slightly less successful than hoped for, a moderate shift to benefits may occur; should controls fail to slow down price increases entirely, a major shift to fringes may result.

Under a successful period of price controls during Phase III, the shift to fringes may not be abated either. If the objectives of price controls are met and CPI levels off or increases in only small increments, labor may see its justification for large wage increases (short of productivity-related boosts) evaporate. Frustrated by wage standards and a somewhat stabilized economy, labor may switch its emphasis to demands for less obvious and perhaps less costly fringe benefits to make up for smaller advances expected in money wages. Under reasonably stable prices, employers in the uncontrolled sectors of the economy may also be motivated to urge benefit rather than wage increases on their workers especially if they are influenced by wage (but not necessarily fringe) pattern setters in the economy.

This thumbnail projection, although limited in time and scope, suggests that expenditures for fringe benefits during a control period extending present standards can rise under a variety of economic conditions with the magnitude of the increases varying with the degree of success or failure registered by the price control program. For most controlled units, at the minimum, the full .7 percent basic "qualified" benefit increase will be resorted to. For many smaller and lagging units, organized or not, controlled or exempted, the 1.5 percent and the full 5 percent (or any part thereof) "qualified" benefit exceptions could be looked to as possibilities for advancing fringes. If the move to "qualified" benefits next year is as large as suggested in this paper, it may cause the Nation's actual average wage-benefit package increase, both under and outside the Pay Board's legal and statistical jurisdiction, to go beyond 5.5 percent with a real potential for it to exceed even the 6.2 percent combined wage and "qualified" benefit basic standards.

Considering the conclusions arrived at in this study and the possible implications they may have on the success of wage controls during Phase III, plus the announcement that organized labor will press for non-wage gains during next year's heavy negotiating calendar,[18] Congress, the Administration and the Pay Board should heed the warning signals. At the minimum, present policy regarding fringes and wages ought to be continued with a closer coordination established between Pay Board and Price Commission operations. In addition, a system to quickly survey wage and benefit movements among *all* sec-

[18] AFL-CIO News, October 14, 1972, page 5: An article headed by the caption, "Economic Controls Trigger Shift: Unions Press Non-wage Gains in New Contract Negotiations."

tors of the economy, whether controlled or not, ought to be devised which would supply the control agencies with current *actual* economy-wide data. Measuring the actual rise in wage and benefit levels and analyzing wage-fringe trade-offs while they are occurring are necessary functions if stabilization policy is to be evaluated and if proper and timely adjustments in the overall wage-benefit program are to be made.

ECONOMIC POLICY AND INFLATION IN THE UNITED STATES: A SURVEY OF DEVELOPMENTS FROM THE ENACTMENT OF THE EMPLOYMENT ACT OF 1946 THROUGH 1972

By EDWARD KNIGHT*

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APPENDIX: SELECTED STATISTICS

*Congressional Research Service, Library of Congress.

Introduction and Overview [1]

During the latter stages of World War II, many Government officials, economists, and others became increasingly concerned about the numerous problems associated with postwar economic adjustment. Since the ending of hostilities would obviously bring forth a major imbalance between aggregate supply and demand, most economists feared that the economy might well revert to its poor performance of the 1930's. Consequently, most of their attention was focused on how the nation could best keep its labor force and industrial capacity fully employed and thereby avoid a serious downturn in economic activity.

This lack of confidence in the economy's ability to recover from a sharp reduction in defense spending was reinforced by memories of the difficulties the economy experienced shortly after the end of World War I. Following a period of continued expansion from late 1918 through the midsummer of 1921, the economy began to suffer from the effects of overexpansion in various sectors of the economy (especially in such areas as automobile production, construction, agriculture, and foreign trade, along with the overextension of bank credit) which in most instances was largely traceable to postwar readjustment. These developments forced the economy into a brief but acute depression, with production, employment and prices falling off sharply. Following several months of deflation and general slowdown in economic activity, there was firm evidence of recovery by early 1923.[2]

During and immediately after World War II, views differed widely over how the nation could most effectively prevent a serious fall-off in employment and income. But there was general agreement that the Federal Government, because of the size of the wartime budget and the added responsibilities given it to combat chronically depressed conditions during the 1930's, would have to play a more active role in the economic life of the nation than in any time in the nation's history. Consequently, in addition to being asked to enact legislation designed to meet the various needs of the economy during postwar conversion, Congress after considerable study and debate enacted into law the Employment Act of 1946, which for the first time in history put Congress on record as officially supporting the idea that the Government of the United States must "* * * use all practicable means consistent with its needs and obligations and other essential considerations of national policy * * * to *promote maximum employment, production and purchasing power.*" (Italics added.) This Act, discussed in

[1] The Author would like to express his appreciation to John B. Henderson, Chief of the Economics Division and Julius W. Allen, Senior Specialist in Business Economics for their helpful comments on this paper.
[2] Harold Underwood Faulkner. *American Economic History* (7th ed.). 1954, pp. 603-605.

greater detail in the next section, reflected the mood of the times. No one wished to return to a period of high unemployment comparable to that of the 1930's. In the year before the outbreak of World War II, unemployment stood at slightly below 15 percent of the total civilian labor force. At the war's end unemployment stood at the exceptionally low level of 2.0 percent.

Though the Act did make reference to "purchasing power", a review of the legislative history of the Act shows no clear connection between this reference and the question of inflation. The phrase "maximum * * * purchasing power" apparently related to the flow of spending needed to generate full employment without any direct reference to the level of prices.

However, the question of inflation did in fact become a pressing and immediate concern of national economic policy at the time the Employment Act was finally approved by Congress. Largely because of the pressures of excess demand which were generated by stored-up savings and the elimination of a large number of wartime controls on production, consumption, and prices, inflation quickly became a serious national problem. On the other hand, wartime fears of large scale unemployment did not materialize.

The flare-up in hostilities in Korea brought about a second, yet relatively brief wave of postwar inflation. On this occasion pressures were generated principally by waves of scare buying and general uncertainty about our military involvement.

Inflation again became a problem from April 1956 through July 1958. Unlike the two earlier postwar inflations, which were generated by the forces of excess demand alone, this period of mild inflation—frequently characterized as "creeping inflation"—was not so severe in its effect on the economy. Rising prices were confined to certain areas of the economy, brought about mainly by the influences of monopoly or near monopoly elements in markets for labor and final output, and pressures generated by a number of structural difficulties in the economy. Moreover, this period differed from earlier experiences in that the economy for most of the time operated with considerable slack, with unemployment becoming a serious problem during the last 12 months of this period.

In 1965, the economy for the fourth time since the enactment of the Employment Act of 1946 entered another period of rising prices, which proved to be the longest and most serious episode since World War II. Inflation was largely the product of excess demand sustained by a combination of excessive federal spending, lowered tax rates and periods of excessive monetary stimulation from 1965 through 1968. Excess demand pressures slackened appreciably after 1969, but prices continued to accelerate through 1970—largely under the influence of cost-push pressures which were mostly the product of "catch-up increases" in wages and prices and expectations of continued inflation. It was not until well after the imposition of economic controls in August 1971 that prices began to show clear signs of improvement. By late 1972, the rate of inflation had been reduced substantially from the 1970 rate; however, for a number of reasons few observ-

ers of the economy were willing to declare the battle won against inflation.

Unemployment, benefiting from the strong pace of the economy during 1965–1968, fell to around the 4 percent level in late 1965 and remained near or slightly below this level through 1969. However, as a result of the mild economic recession in 1970, unemployment rose sharply during 1970 and remained unacceptably high—around 6 percent—during 1971. Thus, for the first time during the postwar period, the nation experienced both high level inflation and relatively severe unemployment, with the economy operating well below capacity. Though the unemployment situation improved slightly following the adoption of the New Economic Policy in August 1971, the rate of joblessness at the end of 1972 was still above 5 percent.

In sum, as will be shown by this survey of economic policy, the record of national economic policy in meeting the objectives of full employment and relative price stability has been uneven. Since 1946, Government policies have succeeded in maintaining both relative price stability and reasonably full employment only in 1952, 1953, 1955, and 1965. In all other years, one of three conditions has prevailed. Low level unemployment has been associated with undesirably large increases in the general price level. Secondly, by contrast, high level unemployment has occurred mostly in periods when prices have been relatively stable. Thirdly, the years 1958, 1970, 1971 and 1972 were exceptional, in that the economy experienced both rapid price increases and high or rising unemployment.

Hence, it can be seen that economic policy has yet to achieve an assured, continuing, acceptable trade-off between full employment and inflation.

Though this survey concerns itself mainly with the role of Government economic policy during periods of inflation, it would be misleading to conclude from this analysis that inflation has been a more serious problem to the nation than unemployment. As noted above, both have offered challenges to policy since 1946, but particularly since 1970 it appears that the economic cost of combatting inflation in terms of the unemployment resulting from attempts to moderate it, is increasing—a tough dilemma for future policy.

Employment Act of 1946: A New Era in Economic Policy

Background

As it became increasingly apparent that World War II was coming to a successful end, students of the economy, public officials and Americans in general began to direct more of their attention to the nation's ability to make the transition from a wartime to a peacetime economy. The end of the war would naturally result in the wholesale cancellation of war contracts and millions of war workers would be faced with the loss of employment and income. In addition, roughly 10 million men and women in military service would be returned to civilian status, greatly swelling the army of workers seeking jobs in the civilian sector.

Given these prospects, President Roosevelt more or less set the stage for a new formulation of national economic policy in the post war period when he said in January of 1944, that every American had "the right to a useful and remunerative job." In other words, full employment of manpower and resources was to become a focal point of economic policy both in war and in peace.

Planning for post war readjustment became widespread in government circles as early as 1943. In 1944, the Twentieth Century Fund in an organizational directory entitled "Post War Planning in the United States" reported that at least 35 Federal agencies were already engaged in conversion planning. Interest was also widespread outside of government. Thousands of businessmen, labor leaders, economists, farmers, journalists and other interested citizens gave much time and thought to the subject. As a result of these efforts, the Congress by the end of the War had enacted into law a long list of Federal programs hopefully designed to put the nation back to work with a minimum of dislocation. Later in the fall of the same year, 1945, Fortune conducted a poll in which it asked the question: "Do you think the Federal Government should provide jobs for everyone able and willing to work, but who cannot get a job in private employment?" 67.7 percent responded that it should.[3]

During the war, restrictions had been placed on the production and consumption of consumer goods, and on the construction of housing, and there had been a corresponding reduction in plant capacity suitable for civilian production. So, at the end of the war, in addition to the manpower problem, the nation was faced with a huge backlog of private and public demand. Financial savings of all individuals, for example, increased sharply from $4 billion in 1939 to a little over $41 billion in 1944.[4] Thus, there was both a great pent-up demand for a wide range of consumer goods and services, and apparently an ample supply of the means to pay for them.

The question facing the economy immediately after the war was whether production could fulfill these needs of the consumer within a reasonable period of time and thereby keep the economy from falling into serious trouble.

Many conceded that the economy might very well recover in a strong manner for a brief period after World War II. The aftermath of World War I had shown, however, that pent-up demand could generate violent instability, as in the 1920–21 boom-and-bust, without achieving an orderly rearrangement of the nation's productive effort to meet peacetime needs.

The great size of the necessary readjustment after World War II threatened difficulties in the longer run too. Many still had serious reservations about the economy's ability to avoid a significant downturn in activity, once the forces of pent-up demand had played themselves out. With the memory of the dismal 1930's clearly fixed in the minds of most Americans, no one could confidently expect the economy to avoid another serious downturn once postwar recovery was completed and the economy was allowed to operate on its own.

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[3] Stephen Kemp Bailey. *Congress Makes a Law, the Story Behind the Employment Act of 1946*. 1950, pp. 9–10.

[4] In relation to total disposable income (personal income less personal taxes), personal savings increased from 3.7 percent in 1939 to an all time high of 25.5 percent in 1944. Since World War II the annual savings rate has ranged from a low of 4.3 percent to a high of 8.2 percent.

Everyone was well aware of the fact that it was the War that had pulled the nation out of a decade of depression. The Government had been called upon during the decade of the 1930's to construct a national economic policy which would play a major role in getting the economy back on its feet again. The fact that 9.5 million Americans or 17 percent of the total civilian labor force were out of jobs in 1939 was a clear indication that the Government had not proved itself able to change radically the course of events before the beginning of the War.

Thus, toward the end of the War the question of full employment, not inflation, was uppermost in the minds of most Americans. Although most Americans strongly believed in maintenance of a free market economy, they believed also that the government had an important role in promoting economic stability and full employment. In a campaign speech given on September 21, 1944, Thomas E. Dewey stated: "If at any time there are not sufficient jobs in private employment to go around, the government can and must create job opportunities, because there must be jobs for all in this country." [5]

On January 22, 1945, a bill entitled the "Full Employment Act of 1945" was introduced by Senator Murray (D., Montana). In the opening section it was declared that: "All Americans able to work and seeking work are entitled to an opportunity for useful, remunerative, regular and full-time employment * * *" in any field of work. Moreover, "* * * the Federal Government has the responsibility, with the assistance and concerted efforts of industry, agriculture, and labor and State and local governments and consistent with the needs and obligations of the Federal Government and other essential considerations of national policy, to assure continuing full employment * * *." In the event that continuing full employment could not be maintained solely by the efforts of the private sector of the economy, "* * * it is the further responsibility of the Federal Government to provide such volume of Federal investment and expenditure as may be needed to assure continuing full employment." [6]

Legislative Highlights

Although it is beyond the scope of this analysis to delve extensively into the legislative history of the Employment Act, it would perhaps be helpful to consider some of the legislative highlights that led to an act on employment policy. Some months after its introduction by Senator Murray, S. 380, during the period August 21 to September 28, 1945, received close scrutiny by the Senate Banking and Currency Committee and in debate on the Senate floor. Following 12 days of Committee hearings, the bill was reported to the Senate on September 22. The Murray proposal was reworded considerably; however, the spirit, intent and scope of the measure were clearly maintained in the bill as reported. Although the bill contained no precise definition of "full employment," practically no one involved in the debate on the bill exhibited any real concern over the lack of precision of the term. It was generally understood that it did not mean complete absence of unemployment. In the course of the Senate debate, Senator

[5] *Congress and the Nation, 1945–1964.* Congressional Quarterly Service (Washington, D.C.), p. 345.
[6] *Ibid.*

O'Mahoney observed "the number of people employed in a free economy may reasonably be expected to be a million or two million or perhaps three million below the entire labor force, without doing any harm to anyone." [7]

Following four days of debate, the Full Employment Act of 1945 was passed by the Senate by the overwhelming majority of 71 to 10. Stephen Bailey in his study of the Employment Act, observed that this particular bill was essentially "* * * a modified version of the original bill as far as the statements of policy were concerned, but the substantive provisions were hardly touched." [8]

Hearings on S. 380 and two other bills (H.R. 2202 and H.R. 4181) were held by the House Expenditures Committee, beginning on September 25, 1945 and continuing off and on until November 7. The bill finally approved by the Committee was substantially different in wording and intent from the Senate passed bill. The title was changed from the "Full Employment Act" to the "Employment Production Act." Moreover, in Bailey's view, the Committee's bill: [9]

> * * * rejected the fundamental principles of the Senate bill. It eliminated the declaration of the right to employment opportunity, of federal responsibility for full employment, the pledge of all the federal resources, including financial means to that end, and the safeguard against international economic warfare.
>
> For these it substituted a policy of aiming for a "high" level employment, production, and purchasing power, and of trying to prevent economic fluctuation by expanding and contracting public works and loans, and avoiding competition of government with private business enterprise.

After two days of debate—December 13 and 14—the House voted by a margin of 225 to 126 to approve the Committee's bill. The bill was sent to conference on December 17 and no further action was taken until next session.

Shortly after the beginning of the 2nd session of the 80th Congress, the Senate and House Conferees began work on the measure and by February 2, 1946, they agreed on a wording which followed closely the House version of the bill. Given the title "Employment Act of 1946," the proposed law provided that:

> The Congress hereby declares that it is the continuing policy and responsibility of the Federal Government to use all practicable means consistent with its needs and obligations and other essential considerations of national policy, with the assistance and cooperation of industry, agriculture, labor, and State and local governments, to coordinate and utilize all its plans, functions, and resources for the purpose of creating and maintaining, in a manner calculated to foster and promote free competitive enterprise and the general welfare, conditions under which there will be afforded useful employment opportunities, including self-employment, for those able, willing, and seeking to work, and to promote maximum employment, production, and purchasing power.

The Act also provided that the President submit annually to the Congress an Economic Report setting forth:

> (1) The levels of employment, production, and purchasing power obtaining in the United States and such levels needed to carry out the policy declared [in the declaration of policy of the Act];
>
> (2) Current and foreseeable trends in the levels of employment, production, and purchasing power;
>
> (3) A review of the economic program of the Federal Government and a review of the economic conditions affecting employment in the United States . . . during

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[7] Congressional Record, Volume 91, Part 7, p. 9059.
[8] Bailey, *Op. cit.*, p. 127.
[9] *Ibid.*, p. 166-167.

the preceding year and of their effect upon employment, production, and purchasing power; and

(4) A program for carrying out the [declaration of policy] together with such recommendation for legislation as he may deem necessary or desirable.

In addition, the law authorized the creation of a three-member Council of Economic Advisers to advise and assist the President in his conduct of economic policy, and a Joint Economic Committee on the Economic Report in the Congress which would make:

(1) a continuing study of matters related to the Economic Report; (2) * * * study means of coordinating programs in order to further policy of this Act; and (3) [act] as a guide to the several committees of the Congress dealing with legislation relating to the Economic Report * * *.

On February 6 the House adopted the conference report by a margin of 320 to 84. The Senate approved the measure by voice vote on February 8, and the President subsequently signed it into law on February 20, 1946 (Public Law 79–304).

Although many of the proponents of the original Full Employment Act expressed deep disappointment over the final form that the Act actually took, many students of the economy at that time were nevertheless in agreement that this act on the part of the Congress marked a milestone in the economic history of the nation. For the first time the Congress of the United States placed itself on record as supporting the view that the Government could no longer play a passive role in the economic life of the nation. The economy had progressed to the stage where the Government would play an increasingly vital and indispensable role in promoting economic growth and stability. The Employment Act of 1946 did not provide any specific guidelines as to how the Government should "* * * promote *maximum* employment, production and purchasing power." Nevertheless, it did provide a foundation upon which the Government could build a national economic policy directed toward the achievement of such objectives.

Qualifications Concerning Use of Terms "Full Employment" and "Price Stability"

Although the Act made no specific reference to "full employment" and "price stability," speaking instead of maximum employment and purchasing power, a review of the policies of the Truman, Eisenhower, Kennedy, Johnson and Nixon administrations clearly indicates that each administration in its conduct of national economic policy has taken the position that the government should strive to conduct its economic affairs in a manner which would promote both relatively full employment and relatively stable prices.[10] No Administration to date has provided a precise definition of either full employment or price stability. Moreover, there has never been complete agreement among students of economics as to the precise definitions of these terms. Recent debate has indicated a rather wide range of opinion concerning the acceptable level of unemployment. This has been largely due to the continuing change in the age and sex composition of the labor force and the change in the distribution of

[10] However, as will be seen in subsequent sections of the study, policy as actually implemented did not, of course, always succeed in giving equal weight to these two objectives.

employment among the various sectors of the economy. On the question of price stability, it is generally held that the nation approaches relative price stability when the increase in the general price level (expressed in the terms of the consumer price index) is kept somewhere within the range of one to two percent per year—preferably nearer the one percent level. These qualifications should be kept clearly in mind when one encounters these terms in the remaining sections of this study.

1945–48: The Impact of Pent-Up Demand and Postwar Adjustment [11]

Although industrial production responded surprisingly fast to the pressures of pent-up demand following the termination of hostilities, the economy generally was unable to fulfill all of the demands of the consumer in such a short period of time. Because of these pressures, prices from the end of 1945 through most of 1948 (measured both in terms of the wholesale price index and the consumer price index) increased at a disturbingly high rate. The index of wholesale prices, for example, increased by about 52 percent while the consumer price index registered a rise of about 34 percent.[12] As seen in Tables 7 and 8 of the Appendix, strong inflationary pressures were felt in virtually every sector of the economy. The only sector not so seriously affected was the service sector, and this was due mainly to the fact that the bulk of consumer demand was centered on durable and nondurable goods, whose supply had been either restricted or stopped during the war.

Thus, as the nation entered the postwar period, it was soon apparent that the focal point of national economic policy would not be full employment but the containing of inflationary pressures within reasonable limits.[13] In the latter stages of his planning for postwar conversion, President Truman felt that his primary objective would be to get the factories back to work for civilian production as quickly as possible. This was the only way both to absorb the impact of greatly increased consumer demand and to provide employment for the millions of men and women suddenly discharged from the military services.

Administration Policy

In addition to programs specially designed to accelerate the pace of conversion, the Administration in 1945 reached the conclusion that tax policy should be stimulative, with particular emphasis on tax adjustments which would promote a significant rise in investment. Immediately following V–J Day, the Administration sent to Congress the Revenue Act of 1945 which provided for a $6 billion reduction in taxes, effective January 1946. This Act, which was quickly enacted into law by Congress on November 8, 1945, authorized the repeal of the excess profits tax, a reduction in corporate surtax rates and repeal

[11] 1945 being the last *full* year of relatively stable prices.

[12] Throughout this analysis the wholesale price index (WPI) and consumer price index (CPI) will be used as the principal measurements of price behavior. A discussion of the relative merits of the WPI and the CPI, along with those of the implicit price deflator is contained in the paper by Roger H. Bezdek, "Conceptual and Empirical Problems in the Measurement of Prices and Productivity," pp. 242–262 above.

[13] Due largely to the strong pressures of aggregate demand and the rapid recovery and subsequent expansion of the private sector of the economy in general, unemployment throughout the period 1946–48 ranged between 3.6 and 3.8 percent of total civilian labor force, or relatively full employment.

of capital stock and declared value excess profits taxes. In terms of 1945 prices, this meant an estimated reduction in corporation taxes of $3.1 billion, hopefully a significant stimulus to business investment. In addition, this revenue measure provided for a $2.6 billion reduction in personal income taxes.

In retrospect, it is apparent that the Federal Government underestimated the impact that a sharp rise in consumer demand would have on business investment. Investment responded very quickly to increased demand, rising sharply from about $10.1 billion in 1945 to about $26.9 billion in 1948, or an increase of 170 percent. With inflation already a problem, this action on the part of the Government turned out to be an added inflationary influence. E. Cary Brown, in his study of fiscal policy during this period, concluded that these measures were: [14]

> * * * improper adjustments to the inflationary situation actually faced in 1946 and 1947. The policy error can be attributed primarily to an incorrect forecast of the kind of action needed, not an incorrect reaction to the situation actually expected. Both Congress and the Administration were under heavy pressure for substantial tax reduction in the face of an expected large increase in unemployment in 1946 and later years. To some extent the Administration resisted these pressures, but they unquestionably helped to shape the program formulated. Had the inflation been clearly foreseen, the Administration would surely have taken the line that it later took, namely, that tax reduction in the face of inflationary pressures was unwise.

In the early months of 1946, it was quite apparent that the nation was on the verge of serious inflation, despite the deflationary influences of sharply reduced Federal spending; from fiscal year 1945 to fiscal year 1946 total Federal outlays had dropped by $33.5 billion. In his State of the Union Message of January 21, 1946, President Truman stated: "Today inflation is our greatest immediate domestic problem." Because of this outlook, the President strongly recommended that Congress extend controls on prices and rent one year beyond the June 30, 1946, expiration date. In making this recommendation, he said:

> If we expect to maintain a steady economy we shall have to maintain price and rent control for many months to come. The inflationary pressures on prices and rents, with relatively few exceptions, are now at an all-time peak. Unless the Price Control Act is renewed there will be no limit to which our price levels would soar. Our country would face a national disaster.

Despite this strong appeal, the Congress—influenced to a large extent by unfavorable public reaction to continued price controls and organized labor's intense drive for higher wages—responded with a price control bill which fell far short of what the President had initially requested. The President expressed his dissatisfaction by vetoing the legislation. Congress thereupon responded by enacting legislation extending the life of the Office of Price Administration for a year; however, the main function of this agency was to decontrol all prices except those on rents, sugar and rice. A year later, controls extended only to rents. Thus, by the end of 1947, World War II government price control was history.

When the pressures on wages and prices failed to subside, the President in November 1947 called Congress into special session for the purpose of gaining the approval of wide powers to control inflation.

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[14] Ralph E. Freeman, *ed. Postwar Economic Trends in the United States*, 1960, pp. 149-150.

Congress responded by granting some minor powers which the President termed "pitifully inadequate." The President tried again in a special session in July of 1948; however, the Congress enacted legislation giving the Federal Reserve Board very limited anti-inflationary powers, namely, the power to curb consumer installment credit and the authority to increase the amount of reserves the Federal Reserve banks must keep on hand, substantially reducing the ability of member banks to grant business loans.[15]

Impotency of Federal Reserve Policy

Finally, a review of the role of monetary policy during this period shows that the Federal Reserve System, because of certain commitments to the Treasury Department, was unable to play any significant role in Government's attempt to dampen the forces of inflation.

Shortly after the start of World War II, the Treasury realized that it would need to borrow large sums of money from the banking system in order to finance the costs of the war effort. In so doing, the Treasury believed that it was essential that interest rates, especially on short term Government securities, should be kept at low levels to minimize the money cost of the war. In response to this apparent need, the Federal Reserve System announced in its Annual Report for 1941 that it was:

> * * * prepared to use its powers to assure that ample supply of funds is available at all times for financing the war effort and to exert its influence toward maintaining conditions in the United States Government security market that are satisfactory from the standpoint of Government requirements.

By guaranteeing the market for short term Treasury bills and establishing a fixed pattern of rates on other Treasury securities, the Federal Reserve was placed in the position where it was obligated to buy all Treasury securities offered by commercial banks. Thus, when a commercial bank needed additional reserves to support growing deposits and an expanding currency, it would simply sell a portion of its holdings of short term government securities. These circumstances, therefore, made it impossible for the Federal Reserve to exercise complete control over the money supply, since it was not in a position to determine the extent to which member banks could buy and sell government securities. During wartime such an arrangement between the Fed and the Treasury was desirable.

After the war, however, the continuation of such an arrangement greatly hampered the Fed's ability to control the money supply in a time of inflation. Attempts on the part of the Fed to tighten money by raising interest rates (through the adjustment of the rediscount rate) and/or increasing the reserve requirements on demand deposits were offset immediately by member banks' sale of government securities to the Fed. The Treasury took the position that the policy of maintaining interest rates on Government securities at levels similar to those which prevailed during the war was essential to its drive to keep down the interest charges on the public debt. Moreover, according to Ralph E. Freeman's account of this period of monetary policy:

> * * * There was widespread apprehension that a decline in bond prices, or the threat of a decline [as a result of increased interest rates on bonds] would

[15] Faulkner. *Op. cit.*, p. 717.

precipitate selling and thus "demoralize" the bond market and make it difficult for industries to finance their reconversion operations.[16]

Thus, until the Fed could regain complete control over the buying and selling of government securities of its member banks (the authority which it had before the war), there was no way in which the system could check the inflationary growth of credit during the inflation of 1945–48.

1950–51: The Korean Buying Spree

After experiencing the effects of inflation for close to two and one-half years, the nation in the late summer of 1948 entered a period of relative price stability which extended through June 1950. At the same time, however, the economy began to show signs of slowing down. From the last quarter of 1948 through 1949 the nation experienced a modest drop in total output (as measured by GNP) due largely to a marked decline in business spending for new plant and equipment and inventories. Unemployment jumped from the reasonably low level of 3.8 percent of the total civilian labor force in 1948 to 5.9 percent in 1949.

Despite these developments, the economy did not stay in recession very long. Due to the effects of a continued strong rise in State and local expenditures throughout this period, plus a substantial pickup in the pace of homebuilding activity and auto sales during the second half of 1949, the economy was well on the way to expansion by the second quarter of 1950.[17] Moreover, with the sudden flare-up of hostilities in Korea in the summer of 1950, the pace of the economy quickened all the more, thereby immediately allaying the fears of many that a serious depression would follow a period of postwar readjustment.

This period of expansion, which was fueled largely by the rapid rise in defense spending, was transmitted to virtually every important sector of the economy. From 1950 through 1953, unemployment fell from 5.3 percent of the total civilian labor force to 2.9 percent—an abnormally low level by peacetime standards. In the same period, gross national product in real terms increased by 16.2 percent and industrial production (measured by the Federal Reserve Board index of industrial production) expanded by 22 percent. Despite these impressive developments, the economy, mainly due to the pressures of defense mobilization for Korea and other trouble spots in the world, quickly embarked upon another round of inflation—the second in five years.

Consumers and businessmen fearing shortages resulting from increased demands by the defense sector sharply increased their spending on durable and nondurable goods immediately after war broke out in June of 1950. Still fresh in their minds were the memories of wartime shortages and the declining purchasing power of money and many forms of savings during the postwar period. This marked acceleration in consumer and business spending placed extraordinary pressure on industrial production. Consequently both wholesale and retail prices rose sharply, especially during the first 10 months of hostilities. From

[16] Freeman, *Op. cit.*, p. 60.

[17] The economy was also favorably affected by a $5 billion reduction in personal income and estate taxes which was approved by Congress in 1948. In so doing, however, Congress had to override President Truman's veto of the measure.

June 1950 through March 1951, two consecutive waves of forward buying forced up wholesale prices by 16.2 percent, or an average annual rate of 20.2 percent, and consumer prices by 8.3 percent, or an average annual rate of 10.7 percent. Fortunately, consumer prices after March of 1951 moderated considerably, increasing at a mildly inflationary rate throughout the rest of the year. By the end of 1951, consumer prices showed definite signs of leveling off. Wholesale prices, on the other hand, actually went into a decline and continued this trend through 1952, thereby eliminating any further threat of runaway inflation. Like the inflation of 1945–1948, this period of inflation generally affected all sectors of the economy, including services which were not seriously affected in the former period.

Administration Policy

In general, the Truman Administration at this time responded quickly to these adverse economic developments. However, most of its restrictive policies initiated in the second half of 1950 did not have any real effect on the economy until well into 1951.

At the time that the conflict in Korea began, Congress was in the process of considering a bill to reduce taxes. On June 29, 1950, the House actually passed a bill incorporating most of the President's earlier proposals (transmitted to Congress on January 23, 1950) for reducing excises and for income tax revision. However, in July 1950, President Truman recommended that Congress instead increase taxes by $5 billion to help partially meet the needs of the war and take some of the pressure off the economy. The Congress responded by approving the Revenue Act of 1950 which incorporated most of the proposals recommended by the President. In general this law, effective October 1, 1950, was intended to raise revenues by an estimated $5.8 billion by: (1) rescinding the 1946 and 1948 cuts in tax rates on individual incomes; and (2) raising the maximum corporation tax rate to 47 percent. Again in 1951, the President recommended a further increase in taxes.

In addition to the reimposition of the excess profits tax (enacted on January 3, 1951) the Congress, after much study and debate, enacted on October 22, 1951, the Revenue Act of 1951, which raised: (1) individual income tax rates by about 11 percent; (2) the maximum corporate tax rate to 52 percent; and (3) excise taxes on liquor, beer, cigarettes, gasoline, autos and other items. Adding the $3.5 billion in taxes derived from excess profits taxes and the $5.4 billion increase in taxes on corporate and individual incomes and on certain consumer goods, taxes from the time of Korea through 1951 were increased by a total of $14.7 billion. These tax rate changes of 1950 and early 1951 generated a big increase in revenues from a greatly enlarged tax base. Meanwhile, the administration also reduced nondefense spending. So the nation achieved a budgetary surplus of about $3.5 billion in fiscal year 1951. (Measured in terms of the cash budget—total administrative expenditures plus Government trust funds—the budgetary surplus amounted to $7.6 billion.) Thus, by the middle of 1951, the nation began to feel the impact of restrictive fiscal policy.

Federal Reserve—Treasury Accord of 1951

Because of its continued commitment to support of the government bond market in the postwar period, the Federal Reserve was unable to play an effective role in the government's drive to combat inflationary pressures generated by the Korean war in the second half of 1950 and in the early months of 1951. The Fed during this period did attempt to restrict credit by raising the rediscount rate on loans to member banks and reserve requirements on their demand and time deposits. Moreover, the Board imposed controls on consumer credit and was given the authority by Congress to regulate loans secured by real estate mortgages. Margin requirements on security loans in the stock market were raised from 50 to 75 percent. These efforts, however, were more or less offset by the ability of member banks to meet their increased reserve requirements by selling Government securities to the Federal Reserve which was obligated to buy them. In the early part of 1951, the Administration reached the conclusion that action should be taken to give the Federal Reserve greater freedom and independence in its management of the nation's monetary affairs. Following a lengthy study of the Treasury-Federal Reserve question, the Joint Economic Committee of the Congress had reached the conclusion as far back as 1949 that:

> * * * we believe that the advantages of avoiding inflation are so great and a restrictive monetary policy can contribute so much to this end that freedom of the Federal Reserve to restrict credit and raise interest rates for general stabilization purposes should be restored even if the cost should prove to be a significant increase in service charges on the public debt and a greater inconvenience to the Treasury in its sale of securities for new financing and refunding purposes.[18]

Following a series of conferences between the Federal Reserve and Treasury, which were attended by President Truman, an accord was reached on March 4, 1951, which enabled the Federal Reserve thereafter to retain more or less full authority over the monetary system. Though the price situation improved markedly in the spring of 1951, the Federal Reserve for the first time since the beginning of World War II was in a position where it could assume an active anti-inflationary role if the need should arise.

Institution of Economic Controls

Finally, in response to the varied economic pressures generated by the Korean War, Congress enacted the Defense Production Act of 1950 (64 Stat., 798, September 8, 1950). One of the key provisions of the Act gave the President explicit authority to institute controls on wages and prices, if necessary. As provided for in the Act, the President initially sought to control wages and prices through voluntary action. However, by the end of 1950 it became apparent that prices and wages could not be stabilized by voluntary means or by selective controls, such as the price and wage ceilings established by the Office

[18] *U.S. Congress. Joint Committee on the Economic Report.* Report of the Subcommittee on Monetary, Credit and Fiscal Policies of the Joint Committee on the Economic Report, Eighty-first Congress, second session. 1949, p. 2.

of Price Stabilization on the automobile industry in December 1950 (15 F.R. 9061 and 15 F.R. 9326). Consequently, President Truman, under the authority of Section 402 of Title IV of the Act, instructed the Director of Price Stabilization (appointed November 30, 1950) to issue a general ceiling price regulation (16 F.R. 808), on January 26, 1951. This action was followed by a general wage stabilization regulation (16 F.R. 816), issued by the Wage Stabilization Board (appointed October 10, 1950) on January 29, 1951.

Immediately upon the issuance of the general ceiling price regulation, the prices of most goods and services were frozen at the highest level charged during the period from December 19, 1950, to January 25, 1951 (16 F.R. 810). In the case of wages, it was provided that:

> No employer shall pay any employee and no employee shall receive "wages, salaries and other compensation" at a rate in excess of the rate at which such employee was compensated on January 25, 1951, without the prior approval or authorization of the Wage Stabilization Board. New employees shall not be compensated at rates higher than those in effect on January 25, 1951, for the jobs for which they are hired. (16 F.R. 817).

The principal agency concerned with the enforcement of the price ceiling regulation was the Office of Price Stabilization which began operations on January 29, 1951, with 13 regional and 42 district branch offices throughout the country. Wage ceilings were administered by a tri-partite Wage Stabilization Board, with representation from labor, management, and the public—all appointed by the President, which had been in existence since October 10, 1950. Salaries were made subject to the control of the Salary Stabilization Board which was established under General Order No. 8 of the Economic Stabilization Administrator of May 10, 1951. These three agencies in turn fell under the jurisdiction and supervision of the agency concerned with all matters relating to economic stabilization, the Economic Stabilization Agency (15 F.R. 6105).

Although wage and price controls no doubt played an important role in reducing inflationary pressures in 1951 and 1952, price trends were to a large extent moderated by two other influences as well: (1) well timed restrictive monetary and fiscal policies; and (2) the economy's ability to adjust—particularly in 1951 and 1952—to the growing demands of the Korean conflict and the domestic market. Once prices showed definite signs of stabilizing, price ceilings on many types of goods sold at the retail level were suspended. However, at the wholesale level about 76 percent of the market transactions remained under active control through 1952.[19]

Authority to stabilize prices and wages under Title IV of the Defense Production Act was finally terminated April 30, 1953, pursuant to Executive Order 10434 of February 6, 1953, and provisions of the Defense Production Act Amendments of 1952 and 1953 (66 Stat. 296, 67 Stat. 131; U.S. Code App. 2166, 2071).

It may be reasonably concluded, therefore, that national economic policy, especially fiscal policy and monetary policy reinforced by the "accord" of 1951, played a significant role in dampening inflationary pressures. This was in marked contrast to the more or less ineffectual role that such policy played in the inflation of 1945–1948. Once prices

[19] Harold Underwood Faulkner. *American Economic History.* (8th ed.) 1960, p. 717.

in general were brought under control in early 1951, the economy throughout the remainder of the Korean conflict continued to expand at an impressive rate, stimulated to a large extent by continued increases in defense spending and an upsurge in consumer spending. The economy in general operated at full capacity and relative full employment and prices remained fairly stable.[20]

1955–58: "Creeping Inflation"

Background

Due largely to the impact of a substantial cutback in defense spending following the termination of hostilities in Korea in the summer of 1953, the nation entered a period of recession which lasted from the second quarter of 1953 through the second quarter of 1954.

Gross national product in real terms fell by 3.7 percent and industrial production dropped off sharply, by 9 percent. Unemployment, after remaining at an exceptionally low level for two years, rose appreciably, increasing from 2.4 percent of the total civilian labor force in August of 1953 to a level of 6.4 percent in March of 1954.

The economy began to recover in the third quarter of 1954. In the early stages, the recovery was primarily influenced by tax cuts enacted by Congress in August 1954. These included a reduction in personal income taxes to pre-Korean levels, the elimination of the excess profits tax, and the reduction of excise taxes on certain goods and services. Overall taxes were reduced by about $7.4 billion, effective in 1954.[21]

The timing of this multi-billion dollar reduction in taxes was fortuitous. The Federal Reserve System was willing to pursue a policy of credit ease during the months of contraction and early recovery, and, in addition, the economy, in the second half of 1954, benefited immensely from a sharp upsurge in consumer demand (especially for durable goods) and a vigorous recovery in housing, followed by an impressive rise in business investment. Therefore, by the early months of 1955, the economy was in full swing again, with every component of GNP, except Federal spending, on the rise.

Interestingly enough, during the strongest phase of the expansion (fourth quarter of 1954 through fourth quarter of 1955) prices, both wholesale and retail, remained virtually stable, continuing the pattern which began in the fourth quarter of 1951. The fact that the economy was operating at near to full capacity and full employment during this period of expanison had little effect on prices. Consumer prices continued to maintain this stable pattern through the early months

[20] As seen in Table 12 of the Appendix, the manufacturing utilization rate—the ratio of total manufacturing output to estimated manufacturing capacity—ranged between 90 and 94 percent during the period 1951–1953. Although optimum capacity utilization rates differ from industry to industry, it is generally believed that manufacturing overall is operating at full capacity when the rate reaches a level somewhere around 91 percent. When capacity increases above this level, it is usually necessary to bring into production less efficient plants and machines, and overtime pay may be required to attract additional labor necessary to maintain these added facilities. If the economy is operating at low level unemployment, then those industries which find that they must increase capacity further will most likely have to rely on less skilled workers, thereby forcing a rise in unit labor costs.

[21] This total also included the $1.4 billion reduction in tax liabilities for individuals and corporations (effective generally January 1, 1954) which came as a result of certain reforms in the tax system approved by Congress in the Internal Revenue Code of 1954.

of 1956. Wholesale prices, however, began to rise in December 1955. Consumer prices, which normally show a lagged response to rises in wholesale prices, did not begin to move upwards until May of 1956, and then rose substantially.

"Creeping Inflation"—April 1956–July 1958

At the same time as prices began to show inflationary tendencies, the economy entered a period of slowdown which began in the first quarter of 1956 and extended through the third quarter of the same year. During this period gross national product in current prices continued to increase at a modest rate, most of the rise being attributable to price increases. Total output in real terms and industrial production (as measured by the Federal Reserve Board index of industrial production) actually drifted downward until mid-year, and it was not until the fourth quarter of 1956 that total production achieved a level exceeding that recorded a year earlier. Much of this decline was due to a marked fall-off in demand for automobiles and housing. Capital spending continued to rise, but not by enough to offset the decline in other sectors of the economy.

Despite these conditions, prices in general continued to increase through mid-1958. In the fourth quarter of 1956, the economy had resumed its upward course and continued to expand at a modest pace through the third quarter of 1957. Although unemployment remained at relatively low levels, averaging 4.1 percent during this period, the economy nevertheless was operating at well below full capacity. After reaching a level of 90 percent in 1955, the manufacturing utilization rate fell slightly to 88 percent in 1956, despite resumption of economic expansion, and continued to decline to 84 percent in 1957. Industrial production fell rather sharply from April through July of 1956, but recovered and set a new peak in September of that year. For the balance of 1956 and the first half of 1957 there was no further rise.

After the third quarter of 1957, there was a rather brief but sharp decline in economic activity which lasted through the first quarter of 1958—the sharpest decline experienced by the nation during the postwar period. Gross national product (in real terms) dropped by 4 percent, and industrial production fell by 14 percent. Similarly, unemployment increased from 4.2 percent of the total civilian labor force in July 1957 to the disturbingly high level of 6.7 percent in March 1958.

One of the most striking features of this recession was the fact that consumer prices, despite a fall-off in demand and production and a sharp rise in unemployment, continued to rise—increasing by 2.3 percent from October 1957 through July 1958, or by an average annual rate of 3 percent.[22] Wholesale prices, on the other hand, remained more stable—increasing by the relatively modest rate of 1.2 percent, or at an average annual rate of 1.6 percent.

Thus, when a comparison is made between the 1955–1958 inflation and the two earlier postwar inflations, they can be seen to be similar

[22] It should be noted, however, that this was not the only time (since World War II) the economy experienced both rising unemployment and inflation in a period of economic recession. During the 1970 recession, unemployment rose from 3.9 percent in January to 6.1 percent in December 1970. In the same period prices increased by 5.1 percent (or 5.9 percent, when computed on a year-to-year basis). For more detail, see pp. 392–395 of this survey.

in only one respect—namely, that prices, both retail and wholesale, rose significantly in virtually every major price category (see Tables 7 and 8 in the Appendix). At the retail level, the categories which experienced the largest increase were food and services, which by weight account for 60.4 percent of the total index; these accounted for 73.0 percent of the total price increase. In the case of wholesale prices, the categories experiencing the largest increases were processed foods and producer finished goods which by weight account for 28.8 percent of the total index; these accounted for 43.0 percent of the total price increase.

Overall, price increases in 1955–1958 were mild in comparison to earlier periods. Consumer prices, for example, increased by an average annual rate of 2.6 percent. During the periods 1946–1948 and 1950–1952 consumer prices increased by annual rates of 10.1 and 5 percent respectively. For this reason, and because of the accompaniment of recession, the term "creeping inflation" was used by many people to describe the performance of prices.

Moreover, as noted earlier, the increase in prices appeared only after a time lag. Prices remained relatively stable during the strongest phase of the 1954–1957 expansion (fourth quarter 1954–fourth quarter 1955), and rose only during the remainder of the expansion, which was quite mild, and during the brief recession of 1957–58. In contrast, the post-World War II and Korean inflations were clearly generated by the pressures of a sudden spurt in economic activity and a low level of unemployment.

"Demand-Pull" Versus "Cost-Push" Theories of Inflation

Much of the discussion of the 1955–1958 inflation centered on the relative importance of two forces of inflation, "demand-pull" and "cost-push". The proponents of the "demand-pull" thesis took the position that the 1955–1958 inflation, like the other inflationary periods of the past, was simply due to an excessive aggregate demand for goods and services. In other words, it was a state in which the flow of money expenditures on output exceeded the flow of output at current prices.

The adherents of the "cost-push" thesis, on the other hand, contended that inflation during the 1955–1958 period was not due to overall excess demand but to the decisions on the part of certain monopoly elements in product markets and/or labor markets to maintain or increase their share of the total national product by raising their prices.[23] Specifically, they contended that the 1955–1958 inflation was due largely to rising labor costs in many of the nation's key industries (especially in steel, meat packing, electrical, automobiles, railroads and trucking) which came as a direct result of organized labor's success in gaining sizable wage increases for its membership. The fact that the capacity utilization rate in manufacturing (after reaching a peak in most important industries in 1955) declined steadily and markedly in most of the nation's key industries from 1955–1957 seemed to have little influence on organized labor's drive for higher wages.[24] Thus, if these industries proved unable to

[23] Richard Perlman, *ed. Inflation, Demand-pull or Cost-push*, 1956, pp. ix-xiv.
[24] Bert G. Hickman. *Growth and Stability of Post War Economy*. Washington, Brookings Institution 1960, pp. 130–131.

absorb increased costs through increases in productivity, they would either have to accept lower profit margins or raise prices to maintain existing profit margins.

Due to a substantial rise in unit labor costs [25] in 1955 and 1956 in most of these and some other industries (see Table 3 of the Appendix), prices increased, and the price increase provided the basis for still higher wage claims, setting off what became known as a cost-price spiral, resulting in a general rise in the price level. Cost-push theorists singled out organized labor and concentrated industries (monopolistic or oligopolistic) as the prime initiators of inflationary pressures, because both elements possessed the market power to set the pattern of wages and prices, particularly in the early stages of an inflationary period.

Schultze's Interpretation of the 1955–58 Inflation

Charles L. Schultze, in a special study paper prepared for the Joint Economic Committee of the Congress in 1959, takes the position that the "creeping inflation" of 1955–58 was neither strictly cost-push nor demand-pull in character. The essential points of his thesis are summarized as follows:

1. The basic point at issue between the "demand-pull" and "cost-push" theorists relates to the sensitivity of prices and wages to changes in the demand for goods and services. If prices and wages are very sensitive, general monetary and fiscal policy can be designed to achieve full employment and price stability. The elimination of aggregate excess demand will choke off inflation without necessarily involving substantial unemployment. If prices and wages are relatively insensitive to moderate changes in demand, the converse holds true.

2. In the modern American economy prices and wages are much more sensitive to increases in demand than to decreases. As a consequence, a rapid shift in the composition of demand will lead to a general rise in prices, even without an excessive growth in the overall level of demand or an autonomous upward push of wages. Prices rise in those sectors of the economy where demands are growing rapidly, and decline by smaller amounts, or not at all, in sectors where demands are falling.

3. When the composition of demand changes rapidly, prices of semi-fabricated materials and components tend to rise, on the average, since price advances among materials in heavy demand are not balanced by price decreases for materials in excess supply. Wage rate gains in most industries tend to equal or almost equal those granted in the rapidly expanding industries. As a consequence, even those industries faced by sagging demand for their products experience a rise in costs. This intensifies the general price rise, since at least some of the higher costs are passed on in prices.

4. The resulting inflation can be explained neither in terms of an overall excess of money demand nor in an autonomous upward push of wages. Rather it originates in excess demands in particular sectors and is spread to the rest of the economy by the cost mechanism. It is a characteristic of the resource allocation process in an economy with rigidities in its price structure. *It is impossible to analyze such an inflation by looking only at aggregate data.* (Italics added.)

5. During the 1955–57 period the overall growth of monetary demand was not excessive. But there was a strong investment boom, offset by declining sales of automobiles and houses. This rapid shift in the composition of demand led to a general price rise, in which the capital goods industries played the major role.

6. If the rise in prices was not a result of an overall excess of monetary demand, neither was it primarily caused by an autonomous upward push of wage rates. There are many indications of this. For example, the capital goods and associated industries accounted for two-thirds of the rise in industrial prices during the period, but in these same industries prices rose substantially more than wage costs.

[25] *Unit labor costs* is the expression of the ratio of the increase in *compensation per man-hour* to the increase in *output per man-hour* (or productivity). Thus, if compensation per man-hour increased at a faster rate than productivity, then unit labor costs would rise; if both increased at the same rate, unit labor costs would remain stable; and if productivity increased at a faster rate than compensation, then unit labor costs would decline.

Profits per unit of output rose in the capital goods industries, although for the economy as a whole they declined.

7. The largest part of the rise in total costs between 1955 and 1957 was accounted for not by the increase in wage costs but by the increase in salary and other overhead costs. This increase in turn was associated with the investment boom. Business firms purchased large amounts of new equipment, hired extensive professional, technical, sales, and clerical staffs, and speeded up research and development projects. When output did not rise producers attempted to recapture at least some of these increased costs in higher prices. This "premature" recapture of fixed costs further accentuated the magnitude of the general price rise.

8. Overhead costs have been increasing as a proportion of total costs throughout the postwar period. This has intensified the downward rigidities in the cost structure of most industries.

9. These downward rigidities in prices and costs put a new floor under each successively higher price level and thus help create a long-term upward bias in prices.

10. While there is a secular upward drift to the price level, its magnitude is not to be judged by the size of the price increases during the 1955–57 period. These years were characterized by an abnormally large shift in the composition of demand and a particular combination of events which led to an abrupt rise in overhead costs.[26]

Thus, Schultze took the position that in a period of mild inflation one could not rely on standard theories of inflation. Both cost-push and demand-pull are active forces, yet neither assumes a dominant role.

Government Policy

Throughout the 1955–58 period, government policy in general was restrictive. In his budget message for fiscal year 1956, President Eisenhower set the stage for fiscal policy for this period when he said:

> Our economy is strong and prosperous, but we should not dissipate our economic strength through inflationary deficits. I have therefore recommended to Congress extension for one year of present excise and corporate income tax rates which are scheduled for reduction on April 1, 1955, under present law * * * Any other course of action would result in either (1) inadequate expenditures for national security, or (2) inflationary borrowing.

The theme was generally the same in his budget message for fiscal 1957:

> * * * in the present state of our financial affairs, I earnestly believe that a tax cut can be deemed justifiable only when it will not unbalance the budget, a budget which makes provision for some reduction, even though modest, in our national debt.

Accordingly in fiscal 1956 and 1957 the Administration succeeded in achieving sizeable budget surpluses—amounting to $4.1 billion and $3.3 billion respectively.

Monetary policy throughout this period was particularly restrictive. Member bank reserves exhibited relatively little movement during the 1955–57 period, with "free reserves" (total excess reserves of member banks less borrowings from Federal Reserve Banks), a key indicator of monetary conditions, dropping off sharply to a negative level in 1955 (i.e., borrowing from Reserve banks being more than member bank excess reserves) and remaining so in 1956 and 1957. Moreover, the total money stock (demand deposits and currency outside banks) exhibited a pattern of "tightness," remaining virtually unchanged from 1955 through 1957. Correspondingly, long-term and short-term interest rates increased markedly during this period.

[26] Charles L. Schultze. *Recent Inflation in the United States*. Prepared for consideration by the Joint Economic Committee, Congress of the United States (Study Paper No. 1), Joint Committee Print, 86th Congress, 1st sess. September 1959, pp. 1–2.

Although monetary and fiscal policies no doubt played an important role in keeping inflationary pressures from getting out of hand, they did not succeed in maintaining price stability. A review of the period April 1956–December 1957, for example, shows that consumer prices increased by 5.9 percent, or at the equivalent average annual rate of 3.5 percent.

In Schultze's view, inflation during this period, which he terms "creeping inflation," was not the type which could be controlled exclusively by *general* monetary and fiscal restraints. In his study referred to earlier, he observed that:

> Since it does not stem primarily from aggregate excess demand, but largely from excess demand in particular sectors of the economy, a slow increase in prices cannot be controlled by general monetary and fiscal policy if full employment is to be maintained. When, as in recent years, prices are rising during a period of growing excess capacity, a further restriction of aggregate demand is more likely to raise costs by reducing productivity than it is to lower costs by reducing wages and profit margins.
>
> Monetary and fiscal policies which are directed specifically toward the sectors where demand is excessive may, however, limit the inflationary effect of a rapid shift in the composition of demand. Between 1955 and 1957 a slower growth in investment demand, coupled with a more even rise in purchases of autos and housing, would have resulted in a smaller price increase and a larger output gain.[27]

Economic Policy: A Shift in Emphasis, 1961–65

Background

After July 1958 prices in general, for the first time since early 1955, began to stabilize. After leveling off in the latter half of 1958, both wholesale and retail prices were little changed from 1959 through the early months of 1965. Consumer prices increased by the modest annual rate of 1.25 percent over the period December 1958–March 1965, and wholesale prices remained virtually unchanged throughout the same period (the wholesale price index was 100.4 in December 1958, and 101.3 in March 1965).

After experiencing a strong but brief recovery, from the 2nd to the 4th quarter of 1958, the economy moved into a period of "sluggishness" (or chronic slack as some prefer to describe this period) which persisted through the second quarter of 1961.

Because of the nation's experience with inflation since the end of World War II, post war government policy until 1961 tended to emphasize the maintenance of price stability.[28] Generally, it was believed that every effort should be made to conduct monetary and fiscal policies in a manner which would not apply inflationary pressures to the economy. Hence, as long as prices remained relatively stable, government policy makers were inclined to think that with such a favorable environment, the economy could be depended upon to grow and expand under its own steam.

However, the two back-to-back recessions occurring during the period 1957–1961 caused higher unemployment and relatively sluggish

[27] Schultze, *Op. cit.*, p. 2.

[28] It should be noted, however, that the bulk of the increase in prices over the period 1945–1961, which included two periods of strong inflation, came during the period 1945–1953. In this period consumer prices increased by 48.6 percent (or the equivalent of 5.1 percent annually), which in turn accounted for 73 percent of the total increase in prices for the period 1945–1961. Despite the problem of inflation in the mid-1950's consumer prices from 1953 through 1961 increased by 11.8 percent, or by the relatively modest annual rate of 1.4 percent. Overall consumer prices during the period 1945–1961 increased by 66.2 percent, or 3.2 percent annually.

growth in aggregate demand. So by the early 1960's, more people came to think that the economy had reached a stage where the emphasis in national economic policy would have to be shifted from primary concern for the maintenance of price stability to the active promotion of economic growth if we wished to eliminate persistent high unemployment. Because prices had remained relatively stable since 1958, it was thought that inflation no longer posed a serious threat to the economy, especially since the economy was operating well below its potential both in terms of production and employment. For this reason it was felt that the government should adopt policies geared to the promotion of significant increases in consumer demand and business investment—the prime forces behind any economic recovery and expansion.

Shortly before the inauguration of President Kennedy in January of 1961, the special task force appointed by the President-elect issued its report on the economy. This report, which foreshadowed national economic policy, expressed the view that:

> Looking forward, one cannot realistically expect to undo in 1961 the inadequacies of several years. It is not realistic to aim for the restoration of high employment within a single calendar year. The goal for 1961 must be to bring the recession to an end, to reinstate a condition of expansion and recovery and to adopt measures likely to make that expansion one that will not after a year or two peter out at levels of activity far below our true potential.[29]

In his first economic message to Congress on February 2, 1961, President Kennedy stated:

> The Nation cannot—and will not—be satisfied with economic decline and slack. The United States cannot afford, in this time of national need and world crisis, to dissipate its opportunities for economic growth. We cannot expect to make good in a day or even a year the accumulated deficiencies of several years. But realistic aims for 1961 are to reverse the downtrend in our economy, to narrow the gap of unemployment, and at the same time to maintain reasonable stability of the price level.

Though the President expressed the hope that the nation could balance the budget in fiscal 1961 and 1962, he determined that economic policy on the whole should be mildly expansionary. At this stage, the Administration was not willing to cut taxes to stimulate recovery, but it did advocate expansion of certain Federal programs to meet "urgent national needs," including additional defense needs. Collectively, these revisions in the Eisenhower budgets for fiscal 1961 and 1962 increased requests for new obligational authority in these years by $5 billion and $5.1 billion, respectively. In so doing, the Administration requested, for example, a temporary extension of unemployment insurance benefits, expansion of the U.S. Employment Service, additional aid to depressed areas, improvements in the old-age, survivors, and disability insurance program, early payments of veteran's life insurance dividends, increases in the minimum wage and expanded coverage, accelerated spending on public works and increased government procurement in labor suplus areas.

The Administration also urged the Federal Reserve to do everything in its power to keep down long-term interest rates. Yet, in doing so, it realized that monetary policy could not play a very active role in stimulating the economy in the light of our deteriorating balance of payments situation. Too much monetary ease could lead to a sharp

[29] New York Times, January 6, 1961, pp. 18-19.

drop in short-term interest rates, encouraging the flight abroad of U.S. capital seeking higher interest rates and further aggravating our balance of payments situation.

However, as time went on, the Administration placed even greater emphasis on fiscal policy in its efforts to promote needed increases in investment and consumption. Although the President in his first Budget Message in January of 1962 projected a budgetary surplus of $463 million for 1963, he requested an increase in overall spending of $3.4 billion. In addition, the Treasury issued liberalized depreciation guidelines on new plant and equipment (effective in 1962) and in October 1962 Congress passed a law authorizing a 7 percent tax credit on business investment in new plant and equipment (effective January 1, 1962).[30] The projected budget surplus was to be achieved principally by an estimated increase in gross national product of $50 billion for calendar 1962. The revenue derived from this increase was believed to be more than enough to offset the effects of increased spending and lower revenue resulting from the tax credit and liberalized depreciation. These two measures were estimated to reduce corporate tax liabilities by $2.5 billion in the first full year of operation.

A New Era in Fiscal Policy

Being somewhat disappointed with the performance of the economy in 1962, the President in 1963 proposed a bold new approach to fiscal policy, namely, a request for an across-the-board reduction in corporation and individual taxes in spite of the prospect of continued budget deficits. He took the position that existing tax rates served as a brake on the economy, keeping it from making any significant progress toward achieving its potential level of performance.

In his special Tax Message to the Congress on January 24, 1963, President Kennedy said:

> Our present choice is not between a tax cut and a balanced budget. The choice, rather, is between chronic deficits arising out of a slow rate of economic growth, and temporary deficits stemming from a tax program designed to promote fuller use of our resources and more rapid economic growth. * * * Unless we release the tax brake which is holding back our economy, it is likely to continue to operate below its potential, federal receipts are likely to remain disappointingly low, and budget deficits are likely to persist. Adoption of the tax program I am proposing will strengthen our nation's economic vitality, and by so doing, will provide the basis for sharply increased budget revenues in future years.

Calculating from 1963 income levels, the Treasury subsequently estimated that such a tax cut, to be effected in stages, would mean an eventual total reduction in corporate and personal income tax liabilities of $13.6 billion by the end of calendar year 1965. Action on this proposal, however, was not taken until a year later. On February 26, 1964, President Johnson signed the new tax reform bill into law, hailing it as "the single most important step that we have taken to strengthen our economy since World War II." This action provided for an overall reduction in corporate and personal income taxes of $11.5 billion ($9.1 billion for individuals and $2.4 billion for corporations), with two-thirds of the cut going into effect in 1964 and the balance in 1965.

[30] This was a modified version of a similar proposal recommended by President Kennedy in 1961.

In addition to the investment tax credit of 1962, the authorization of liberalized depreciation guidelines in 1962, and the multi-billion dollar tax cut of 1964, Congress at President Johnson's request enacted into law in 1965 reductions in excise taxes totalling $4.7 billion to be put into effect at various stages through 1969. Thus, with the scheduled reduction of $1.8 billion in excises in 1965 plus the total reduction in Federal taxes since 1962, personal and corporate tax liability based on 1965 income levels—as estimated by the Treasury—was reduced by about $20 billion. Barring any major rise in defense spending, the Administration felt confident that this reduction in taxes would approximately offset the increase in revenue from the closing of the gap between actual and potential (or full employment) gross national product.[31] In exchange for reduced tax rates, the Administration contended that the economic activity generated by such a stimulus would broaden the income base of the nation, and so recoup most, if not all, of the revenue lost.

Fiscal policy was stimulative from the standpoint of Federal spending as well, throughout most of this period. Total spending measured in terms of the unified budget (total administrative budget expenditures plus trust fund expenditures less intergovernmental transactions) from fiscal 1961 through fiscal 1964 increased steadily and markedly by about $21 billion, or an average annual rate of 6.5 percent. Moreover, despite the Administration's announced objective of balancing the budget in fiscal years 1961 and 1962, the budget scored deficits of $3.4 and $7.1 billion respectively. Budgetary deficits of $4.8 and $5.9 billion were also recorded in fiscal years 1963 and 1964.

Monetary policy in 1961–65 was required to accept the U.S. balance of payments position as a limiting factor on credit expansion. Nevertheless, policy was permissive, to the point of meeting the growing credit needs of the economy and avoiding any serious increases in long-term borrowing costs.

Dissenting Views on Expansionary Fiscal Policy

Throughout this period of expansionary fiscal policy and relative monetary ease, there were still many economists who feared their inflationary impact. Arthur Burns, Chairman of the Council of Economic Advisers under President Eisenhower, expressed his concern on this matter on several occasions. In his appearance before the Joint Economic Committee, which was holding hearings on the President's 1963 Economic Report, he testified that:

* * * The danger of inflation and the risk of devaluation of the dollar are being understated these days. Let me mention only the fact that liquid assets

[31] The Kennedy Administration, shortly after it assumed office in 1961, took the position that economic policy overall should be geared to the objective of lowering unemployment to an *interim* full employment target of 4.0 percent. In the first quarter of 1961, unemployment stood at 6.8 percent. If unemployment were to be reduced to the interim level by the end of 1961, it was estimated that gross national production would have had to increase by $40 billion more than it *actually* did achieve in that year. This difference (or gap) between *actual* and *potential* GNP was based on its study of various economic trends experienced by the economy since 1955—the last year in which the economy operated at full potential and near to full employment. The Administration realized, however, that the closing of the gap between actual and potential GNP could not be achieved at once; it would require a brief period of recovery from the 1960–1961 recession and then several years of economic expansion before the objective could be achieved.

In arriving at the 4 percent interim rate, the Administration felt that, given the framework of the economy at the time, a lower rate would have been unsustainable without a renewal of inflationary pressures. A further reduction of the rate would, therefore, have to come as a result of a gradual breakdown of certain structural rigidities in the labor market (although some progress in this direction also might be made through economic growth), and not from more expansionary monetary and fiscal policy. In making this assumption, the Administration did not try to estimate precisely the point beyond which a policy of full employment would run counter to the objectives of price stability. Nevertheless, such a policy was thought to be compatible with price stability at an unemployment rate in the vicinity of the 4 percent level.

held by the public have recently risen sharply. The increase was $25 billion in 1961 and $34 billion in 1962, in contrast to an average of annual increase from 1955 to 1960 of only $13 billion. * * *

Nor is inflation or its speculative anticipation the only danger of a policy of long-range deficits. A nation's mood can change suddenly. A series of large deficits in times when the economy is advancing may cause a revulsion of feeling and later paralyze the government's ability to deal with a recession.

In view of these dangers, I find it impossible to endorse the Administration's fiscal recommendations as they stand.[32]

Professor Burns, however, made it clear that he was not opposed to the principle of the tax cut—namely, reducing the "fiscal drag" on the economy from excessively burdensome tax rates. Nevertheless, if the nation was to have a tax cut, which he believed should be spread over several years, the Administration should keep the size of the deficit to a minimum by holding the line on Federal spending. Such policy, he thought, would greatly reduce the prospect of long-range deficits and renewed inflation. He was, therefore, opposed to a policy of expansive Federal spending.

In an interview with U.S. News & World Report (published in its May 6, 1963 issue) Emerson Schmidt, research director of the U.S. Chamber of Commerce, expressed similar concern:

Government budget policies pose a real danger of inflation for the future. Except for a small surplus in 1960, we have had deficits ever since 1957, and it looks like we are in for several more years of deficits.

The prospect is that much of the Government deficit may have to be financed through the banking system. This builds up the money supply and adds to the dangers of inflation.

The Administration, on the other hand, took the position that as long as the economy was operating well below full capacity and employment, there was no real danger that inflation would be generated from increases in demand resulting from expansive monetary and fiscal policies. When these criticisms were being made in 1963, the Administration estimated the gap between actual and potential GNP to be somewhere around $30 billion.[33] Unemployment in 1963 averaged 5.7 percent, considerably above the interim objective of 4.0 percent.

Nevertheless, the Administration repeatedly expressed concern about the possibility of cost-push inflation. Generally, government policy makers argued that both the domestic and the international situation required that both labor and management should exercise moderation on wages and prices. Wages overall, they claimed, should rise at a rate not exceeding the increase in productivity of the national economy (measured in terms of growth in output per man-hour). Business enterprises, especially in large and highly concentrated industries, should not automatically increase prices to cover increased costs. They should first exert every effort to meet rising material and labor costs through serious attempts at increasing productivity. If certain firms or industries found it impossible to offset rising costs totally or partially through increases in productivity, then prices would no doubt have to be increased in order to insure adequate profit margins. Wage earners, on the other hand, could expect a reduction in real wage rates (gained from management), if powerful labor interests nationally led the way in increasing money wages by an amount greater than increases in the overall trend rate in productivity for the private sector.

[32] U.S. *Congress. Joint Economic Committee.* January 1963 Economic Report of the President. Hearings. 88th Congress, 1st session, vol. 1, p. 493.

[33] See footnote 31 on p. 385.

Wage-Price Guideposts: A Means of Avoiding Cost-Push Inflation

In its first Economic Report submitted to Congress in 1962, the Kennedy Administration devoted a whole chapter to the question of inflation. At the conclusion, it proposed policy guidelines on wages and prices which it hoped would not only be of assistance in warding off inflationary pressures in general, but would provide an instrument by which the Administration could hopefully deal more effectively with the "cost-push" question.

As defined in the Report:

> The general guide for noninflationary wage behavior is that the rate of increase in wage rates (including fringe benefits) in each industry be equal to the trend rate of over-all productivity increase. General acceptance of this guide would maintain stability of labor cost per unit of output for the economy as a whole—though not of course for individual industries.
>
> The general guide for noninflationary price behavior calls for price reduction if the industry's rate of productivity increase exceeds the over-all rate—for this would mean declining unit labor costs; it calls for an appropriate increase in price if the opposite relationship prevails; and it calls for stable prices if the two rates of productivity increase are equal.
>
> These are advanced as general guideposts.[34]

The Administration cautioned, however, against a rigid interpretation of the guideposts:

> To reconcile (the guideposts) with objectives of equity and efficiency, specific modifications must be made to adapt them to the circumstances of particular industries. If all of these modifications are made, each in the specific circumstances to which it applies, they are consistent with stability of the general price level. Public judgments about the effects on the price level of particular wage or price decisions should take into account the modifications as well as the general guides. The most important modifications are the following:
>
> (1) Wage rate increases would exceed the general guide rate in an industry which would otherwise be unable to attract sufficient labor; or in which wage rates are exceptionally low compared with the range of wages earned elsewhere by similar labor, because the bargaining position of workers has been weak in particular local labor markets.
>
> (2) Wage rate increases would fall short of the general guide rate in an industry which could not provide jobs for its entire labor force even in times of generally full employment; or in which wage rates are exceptionally high compared with the range of wages earned elsewhere by similar labor, because the bargaining position of workers has been especially strong.
>
> (3) Prices would rise more rapidly, or fall more slowly, than indicated by the general guide rate in an industry in which the level of profits was insufficient to attract the capital required to finance a needed expansion in capacity; or in which costs other than labor costs had risen.
>
> (4) Prices would rise more slowly, or fall more rapidly, than indicated by the general guide in an industry in which the relation of productive capacity to full employment demand shows the desirability of an outflow of capital from the industry; or in which costs other than labor costs have fallen; or in which excessive market power has resulted in rates of profit substantially higher than those earned elsewhere on investments of comparable risk.[35]

Shortly after this policy was outlined, labor and management in the iron and steel industry (on March 31, 1962) agreed to a contract which called for a small increase in fringe benefits and no increases in wages—effective July 1, 1961. Since the fall of 1961, the Administration had taken a personal interest in these negotiations, making it clear to both sides that a price increase and/or an inflationary wage settlement in 1962 would seriously affect the national interest, possibly

[34] U.S. *President.* Economic Report of the President; transmitted to the Congress January 1962; together with the Annual Report of the Council of Economic Advisers, 1962, pp. 185–190.
[35] *Ibid.*

setting off a wage-price spiral that would stunt economic growth, keep unemployment high, weaken the dollar, and cut into the sale of steel exports. Therefore, when the wage agreement was announced, the President hailed the contract as being "obviously noninflationary."

On April 10, 1962, the Administration was therefore greatly disturbed by the announcement of U.S. Steel that it would raise the price of steel across-the-board by $6 per ton, effective immediately. Seven other firms followed suit in very short order. The Administration reacted strongly, firmly taking the position that this action was unjustified; the industry at the time was operating well below full capacity, was facing increased competition from domestic producers of substitutable materials—cement, plastics and aluminum, and was losing ground rapidly in the highly competitive world market. Following three days of governmental pressure, Joseph Block, board chairman of Inland Steel, gave support to the government's stand, announcing to the press that "we do not feel that an advance in steel prices at this time would be in the national interest." Shortly thereafter, the price increase was rescinded by all eight firms involved in the controversy.

The government received considerable criticism for its intervention, but the reversal of the steel price increase marked a turning point in national economic policy in the wage-price field. From that point on, the Administration gave every indication that it would take firm action to keep prices and wages in line with its guidepost policy.

Although both labor and management were extremely critical of the guidepost concept, wage increases remained generally in line with increases in over-all productivity, and prices remained relatively stable from 1962 through the early months of 1965. Unit labor costs (the ratio of increases in compensation per man-hour to increases in output per man-hour, or productivity) increased by only 2.5 percent during 1962–1965, or by 0.8 percent annually.[36] Prices behaved in a similar fashion, increasing by 4.3 percent from January 1962 through March 1965, or by 1.25 percent annually.

1965–72: "Guns and Butter" Excesses and Failure of Conventional Anti-Inflation Policies

Background

Following 47 months of recovery and sustained expansion the economy in 1965 possessed the momentum needed to achieve two central economic objectives set down by the Kennedy Administration in 1961—namely, full utilization of the nation's productive capacity and full employment of the nation's labor force. The gap between actual and potential GNP, which had persisted as far back as 1955, was virtually eliminated by the end of 1965.[37] At the same time, the rate of unemployment fell to 4.0 percent of the total labor force in December 1965, the lowest level recorded since April 1957.

Though virtual full utilization of the economy's capacity had been achieved and the Government's "interim" full employment target had been met, many students of the economy were skeptical about the Government's capacity to keep the economy in high gear, maintain

[36] See Table 3 in the Appendix.
[37] See Tables 2 and 13 in the Appendix.

relatively full employment and keep prices relatively stable. In short, the crucial question facing the Johnson Administration in late 1965 was: Could it exercise the degree of monetary and fiscal discipline needed to avoid a serious overheating of the economy in the period ahead? In 1965 and 1966 the Administration repeatedly expressed confidence that its economic policies could readily maintain a healthy non-inflationary balance in the economy. However, as history has shown, this proved to be a faulty appraisal. The effects of rising costs, sharp increases in Federal spending both for defense and for domestic programs, reduced revenues as a result of tax cuts in 1964 and 1965, and excessive monetary stimulation soon led to a serious overheating of the economy. Thus in 1965—following 6 years of relatively stable prices—the economy entered a new era of inflation which brought the longest and most serious general price increase since World War II.

From 1964 through mid-1972 prices rose by more than 35 percent, or about 4 percent compounded annually. Following a six year period in which prices overall increased by only 7.3 percent, or 1.2 percent annually, consumer prices in 1965 showed the first sign of an accelerating increase, rising 1.7 percent over 1964. Thereafter, as inflationary pressures worsened in response to growing demand pressures, prices (on a year-to-year basis) increased by 2.9 percent in 1966 and 1967, 4.2 percent in 1968 and 5.4 percent in 1969. Though demand pressures slackened after 1969, prices continued to accelerate through 1970, increasing by a rate of almost 6.0 percent in that year. Thereafter the rate of price increase moderated in 1971 and 1972, but inflation remained a serious national problem.

In order to gain some perspective on the persistence of inflation over such an extended period, the following sections will discuss in some detail (1) the price patterns during the 1965–72 period and (2) the economic policies pursued by the Johnson and Nixon Administrations to combat inflation. Though the first of these sections will review mainly the behavior of prices and the economic factors which led to the intensification of inflationary conditions during this period, occasional reference will be made to certain Government policy actions which were associated with major shifts in economic activity. A more detailed description of these and other policy actions will be contained in the second section, which will direct its attention mainly to the role of Government economic policy in coping with inflation during this period. Moreover, in certain instances it will be seen that one section will contain a description of price patterns or policy developments which are pertinent to observations made in the other section. Hence, to assure reasonable coverage and yet avoid repetition, "see also" page references are given.

The Pattern of Price Increases

Role of Excess Demand, 1965–68

The buildup of excess demand from 1965 through 1968 started slowly, but was fueled by sharp increases in Federal spending, lowered tax rates and excessive monetary stimulation. From fiscal 1965 through fiscal 1968 Federal spending rose by $60 billion. This 50 percent rise in spending was largely the result of decisions by the Johnson Administration to (1) escalate our military involvement in Vietnam and (2) markedly expand the Government's role in combating

a wide range of social and economic ills facing the nation at the time. The latter effort was designed to meet the aims of the "Great Society" program launched officially by the Johnson Administration in early 1965.

During this period spending increases were about evenly split between defense and nondefense activities—with $30.9 billion going for military needs and $29.5 billion for domestic programs. Moreover, because Federal spending far exceeded revenues, progressively larger budget deficits of $3.8, $8.7 and $25.2 billion were recorded in fiscal years 1966, 1967 and 1968. Likewise, with the exception of a period of "tightness" in 1966, monetary policy remained stimulative. From 1965 through 1968, the nation's money stock (demand deposits and currency outside banks) rose by an annual rate of 5.4 percent which was more than double the 2.5 percent annual rate recorded during 1958–1965—a period of highly stable prices.

Unlike the Korean experience,[38] there was no comparable surge in prices during the early stages of the Vietnam buildup, despite evidence of excess demand pressures. It should be noted that in the three months preceding the decision to escalate the Vietnam conflict in July 1965, prices rose faster than they had risen in several years. From March through June 1965 consumer prices rose by an annual rate of 4 percent, compared to a rise of 1.2 percent annually during the 1958–64 period. However, from June through November 1965 they remained virtually stable and then resumed a relatively *mild* rate of increase which continued more or less unabated through October 1966.

Rising prices from March 1965 to March 1966 were due largely to sharp increases in prices of farm products and processed foods.[39] In the case of wholesale prices (which increased overall by 4.0 percent), prices of farm products and processed foods and feeds rose by 11.9 and 8.0 percent, respectively—accounting for 68.3 percent of the total increase in the wholesale price index. In the same period, however, prices of all industrial commodities, which by weight accounted for 73 percent of the total index, registered a relatively modest gain of 2.0 percent.

Correspondingly, consumer price movements were selective, not across the board during the same period. The 2.7 percent gain in the consumer price index was due almost entirely to rising prices for food and services. Food, by far the most active component in the index, increased by 6.5 percent and accounted for 52.3 percent of the overall rise in consumer prices. Prices of services increased by 2.6 percent, a rate very much in line with the 2.4 percent annual increase recorded during 1958–1964. Thus, if food prices had remained stable during this period, prices in general no doubt would have continued their record of relative stability.

The economy entered a more severe inflationary phase in March of 1966. Toward the end of 1965 and in the early months of 1966, the economy showed clear evidence of operating at full potential; unemployment fell to its lowest level in 12 years and the manufacturing utilization rate rose to its highest level since 1953—91 percent.[40] In

[38] For more detail about the Korean period, see pp. 373-377 of this survey.

[39] Much of the increase was due to a marked decline in cattle and hog production, bad weather in many parts of the nation and a sharp rise in foreign demand for domestically produced wheat.

[40] See Table 12 in the Appendix.

fact, many observers at that time felt that the economy was already operating at an unsustainable pace, particularly because of the marked increase in spending for the effort in Vietnam. Thus, as the economy approached capacity output, pressures to raise prices were building up after March 1966.

During the period of March to September 1966, consumer prices overall increased at the annual rate of 3.9 percent—considerably higher than the 2.7 percent rate recorded during March 1965–March 1966. Unlike the earlier period, price increases were not confined primarily to food prices. In addition to a sharp rise in service prices, due largely to increased prices for medical and personal care, price increases spread to the industrial sector. After remaining virtually stable from March 1965 to March 1966, prices of the commodities-less-food component of the consumer price index during the period March 1966 through September 1966, for example, increased at an annual rate of 3.1 percent. Food price increases, on the other hand, slowed markedly, increasing at an annual rate of 2.9 percent, compared to the rate of 6.5 percent of a year earlier.

Wholesale prices from March 1966 through September 1966 increased at an annual rate of 2.6 percent, which was considerably below the 4.0 percent rate experienced in the previous twelve months. This was due largely to the marked improvement in prices of farm products and processed food. At the same time, prices of industrial commodities increased at a slightly higher annual rate than in the earlier twelve month period. After reaching a peak in September 1966, wholesale prices actually decreased, continuing this trend through the end of the year.

Following the lead of wholesale prices, consumer prices for the first time in several months tapered off and remained relatively stable through the rest of 1966. Thus, by the fall of 1966, prices generally began to show signs of stability, momentarily allaying the fears of many that the nation, especially because of the growing needs of Vietnam and the continuing rapid pace of the economy, was threatened with a serious inflation similar to that experienced during the first year of the Korean conflict.

Though prices continued this stable pattern through March 1967, this proved to be a temporary pause. After the "mini-recession" from the third quarter of 1966 through the second quarter of 1967, price pressures began to build again in the second half of 1967, marking the beginning of a period of accelerating inflation which continued unabated through 1970. By mid-1967, the economy finally began to feel the full impact of strong demand forces which had been building since mid-1965. With the economy at full employment, serious labor shortages, along with the desire of wage earners to keep ahead of inflation, resulted in wage settlements that outstripped increases in productivity in the private nonfarm sector of the economy. Unit labor costs in the private nonfarm sector rose sharply—by 4 percent per annum—for the first time since 1960.[41] With this rise, reinforced by a 6.2 percent rise in unit non-labor costs in the private nonfarm sector (see Table 3 in the Appendix), consumer prices increased at an annual rate of almost 4.0 percent during the second half of 1967.

[41] A definition of unit labor costs may be found on p. 380 of this survey.

By the end of 1967, the influences of excess demand, fueled by heavy Federal spending and monetary expansion, became more pronounced and widespread, resulting in a further intensification of inflationary pressures. Gains in worker compensation continued to exceed increases in productivity in the private nonfarm sector, causing a continuing sharp rise in unit labor costs. In response to these conditions, consumer prices rose by 4.2 percent in 1968 (compared to a 3.0 percent rise in 1967), affecting every major category in the index of consumer prices. For example, increases by major price categories showed: 3.7 percent for commodities, less food; 3.6 percent for food; and 5.2 percent for services.

Reinforcement by Cost-Push Pressures, 1969–72

The pressure of demand in 1969 was less severe than in 1967–1968. This was due to two dampening influences: (1) sharp cutback in the rate of rise in Federal spending, in an attempt to achieve a budgetary surplus in fiscal 1969, and (2) a shift to an actively restrictive monetary policy in 1969. Defense spending grew hardly at all, and there was a marked reduction in the rate of rise in spending for domestic programs. Total Federal outlays in fiscal year 1969 increased by $5.7 billion, with defense spending increasing by only $700 million and nondefense spending by $5.0 billion. This contrasted markedly with the $20.5 billion increase in total outlays for fiscal year 1968, of which $10.4 billion went for defense and $10.1 billion for nondefense activities. After being highly expansionary in 1967 and 1968, monetary policy tightened noticeably in 1969. For example, the increase in the money stock (demand deposits and currency outside banks) was 3.2 percent—in contrast to 6.6 and 7.8 percent gains in 1967 and 1968.[42]

These actively restrictive fiscal and monetary policies played a major role in slowing the pace of the economy. From the first through the fourth quarter of 1969, aggregate output in real terms rose by less than 1 percent. However, despite this sharp decline in the rate of expansion, inflationary pressures continued to intensify. Consumer prices rose by 5.4 percent, the highest increase registered since 1951, the peak year of the Korean inflation. Most of this rise was due to continuing strong cost-push pressures generated by previous rounds of price increase. Gains in hourly compensation accelerated while productivity, for the first time since 1956, actually declined. Consequently, unit labor costs rose by 7.1 percent, substantially exceeding the increases recorded in 1967 and 1968.

In 1970, the economy continued to feel the impact of restrictive economic policies initiated by the Nixon Administration in 1969. The economy experienced a mild recession, as reflected by a 1.5 percent decline in real GNP between the third quarter of 1969 and the fourth quarter of 1970. Excess capacity mounted rapidly through the year. The gap between potential and actual GNP, which started to open about mid-1969, widened sharply and reached 6.8 percent of potential GNP by the end of 1970. In a similar fashion, the margin of unused industrial capacity widened appreciably, reflected by a drop in the manufacturing utilization rate from 80.7 percent in the first quarter of 1970 to 74.1 percent in the fourth quarter of 1970.

[42] A more detailed discussion of Government anti-inflation policy may be found on pp. 404–407 of this survey.

As a corollary, unemployment rose sharply from 3.9 percent in January to 6.1 percent in December 1970; business investment, which had boomed from 1964 through 1969, registered no gain; business profits deteriorated further over the year; consumer spending became very sluggish; and the savings rate rose from 6.3 percent of disposable personal income in the fourth quarter of 1969 of 8.3 percent by the fourth quarter of 1970.

Despite growing slack in the economy, inflation continued to accelerate. Consumer prices rose by 5.9 percent, once again marking the sharpest rise in prices since 1951, the peak year of the Korean inflation. As in 1969, rising costs, evident in the continuing sharp rise in unit labor costs and unit non-labor costs, were the sustaining force behind inflation in 1970.

Statistical movements in prices and costs however do not tell the full story about the stubborn nature of inflation during 1970. In addition to the carry-over effects of past cost increases, the wage-price spiral was reinforced by a worsening inflation psychology that permeated all segments of the economy. Businessmen, labor unions and even consumers operated under the assumption that serious inflation would continue largely unabated. Thus on the basis of past cost increases and the anticipation of rising future costs, most business firms did not hesitate to increase prices. Sharp increases in worker compensation during the year reflected continuing efforts, particularly by large labor unions, to compensate for past and future price increases. Meanwhile, in reaction against growing lenders' risk from rising prices, interest rates rose to record levels, adding substantially to costs. In addition to these factors, lagged increases in local, State and Federal taxes, higher rates set in regulated industries, and other cost and price increases added to the pressure on costs in 1970.

As the economy moved into 1971, there were signs that the pace of inflation might be slackening, following almost three and one half years of accelerating price rise. From January through April the rise in consumer prices fell off to a seasonally adjusted annual rate of 2.9 percent, which was half the year-to-year rate recorded in 1970. However, this proved to be only a momentary improvement. From April through July prices rose by a seasonally adjusted annual rate of 4.8 percent—once again heightening inflationary expectations throughout the economy. Given this bad psychological setting, the persistence of high level unemployment, and a rapid deterioration in the U.S. balance-of-payments position, the Nixon Administration concluded sometime in midsummer that the soundest policy then was to apply wage and price controls to the economy without delay. On August 15, 1971, a 90-day wage-price freeze was instituted to stem the tide of inflation, bring a halt to inflationary expectations and provide time to prepare and set in motion a more flexible and selective system of mandatory controls.[43]

The impact of the freeze was readily apparent in the behavior of prices. From August through November, the consumer price index rose by a seasonally adjusted annual rate of only 1.9 percent, compared to a greater than 4 percent gain (annual rate) in the previous three months. In the same period wholesale prices *declined* at an adjusted

[43] For more detail, see pp. 412–414 in this survey

rate of 0.8 percent, in contrast to a 5.3 percent annual rate of increase in the preceding 3 months. In December both indexes rose sharply; however, this was due largely to the impact of price adjustments following the lifting of the freeze and the shift to a selective system of mandatory controls.

Thus for the first time in several years, there was an appreciable reduction in the rate of inflation in 1971. On a year-to-year basis consumer prices increased at a rate of 4.3 percent, compared to 5.9 percent in 1970. The cause of this improvement in the pattern of prices is debatable. To be sure, the rate of rise in unit labor and non-labor costs was reduced markedly during 1971. But it was also evident that inflationary expectations ebbed in response to the freeze placed on wages and prices. Had not the Government intervened in the inflationary process in mid-1971, it is not certain that the price rise would have moderated during the remainder of the year.

From December 1971 through August 1972, price patterns continued to improve, despite a momentary bulge in prices in the period following the termination of the freeze. During the early stages of the Phase II stabilization program, retail prices rose at an annual rate of 4.8 percent from November 1971 to February 1972. This resulted mainly from a concentration of postponed wage and price adjustments allowed to go into effect after the freeze. Thereafter, the annual rate of increase of consumer prices fell to slightly less than 3.0 percent from February through August 1972—the first anniversary of the Administration's economic stabilization program. Overall, during the first year of economic controls, consumer prices also increased by a 3 percent rate, which was a marked improvement over the 4.4 percent rate registered during the previous 12 month period (August 1970–August 1971).[44]

Despite the fact that the rate of price increase was only half that of 1970, few observers of the economy were willing to declare the battle won against serious inflation. The economy in August of 1972 still faced many uncertainties. Could controls reduce the rate of inflation below 3 percent? Could a more rapid rate of economic growth cause a resumption of faster price increases, with or without controls? Have controls served only to mask the symptoms of inflation? Can conventional monetary and fiscal policies alone maintain price stability when selective controls are removed? Is the continuation of controls having an adverse effect on employment, making it more difficult to whittle down the unemployment rate?

In summary, the 1965–72 inflation went through four relatively distinguishable phases. First there was the period of *mild and intermittent* price increases which began in March 1965 and extended through mid-1967. Then came a period of *excess demand* which lasted from mid-1967 through most of 1969. In this period prices accelerated in response to excess demand conditions fueled by overly stimulative fiscal and monetary policies during 1965–68. Third, and perhaps more difficult to pinpoint, there was the period of fairly uncontrolled *cost-push* inflation which came into full play in late 1969 and extended through mid-1971. In this period prices continued to accelerate, despite an economic slowdown and the cessation of excess demand conditions in the economy. Prices were driven up by rising costs

[44] For more detail, see pp. 418–420 of this survey. Data for the last 4 months of 1972 was not available at the time this paper was written.

fueled by "catch-up increases" in wages and prices which were in turn reinforced by the persistence of widespread inflationary expectations. The fourth phase, which began in August 1971, can perhaps be best described as a period of *managed* inflation, reflecting the impact of government-imposed wage and price controls.

Government Economic Policies

Johnson Administration "Guns and Butter" Policies, 1965–66

In his January 1965 Economic Report to the Congress, President Johnson made the following appraisal of the economy to set the stage of economic policy for the next 12 months:

> I am pleased to report—
>
> That the state of our economy is excellent;
>
> That the rising tide of our prosperity, drawing new strength from the 1964 tax cut, is about to enter its fifth consecutive year; and
>
> That, with sound policy measures, we can look forward to uninterrupted and vigorous expansion in the year ahead.

With the economy still operating below full capacity and relatively full employment, the Administration decided that economic policy during the year should remain expansionary.[45] Federal spending from the first quarter through the second quarter of 1965 (measured in terms of the national income and accounts budget) increased by $7.4 billion, or 6 percent. With Congressional enactment of the Revenue Act of 1964 and the Excise Tax Reduction Act of 1965, taxes overall were reduced by slightly over $13 billion in 1965, a substantial fiscal stimulus.

Likewise monetary policy, as administered by the Federal Reserve Board, remained an expansionary influence in the economy during the year, with the total money stock (demand deposits and currency outside banks) rising at an annual rate of 4.7 percent, slightly above the 4.5 percent rate of 1964.

However, the economy, following 47 months of recovery and expansion, appeared to be fast approaching full capacity and relatively full employment for the first time in several years, and the Administration realized that it would be more difficult to maintain relative price stability in 1965 than in previous years. Therefore, it chose to place increasing emphasis on wage-price guideposts as a means of combating excessive increases in wages and achieving stable prices.[46] In his Economic Message to Congress, President Johnson reaffirmed his support of the guidepost concept and stated that he fully intended:

> To maintain a close watch on wage and price developments;
>
> To draw public attention to those private actions which threaten the public interest;
>
> To ask, as I have recently done in the case of steel prices, for special, detailed analysis of price or wage increases in key sectors of the economy; and
>
> To oppose legislative enactments that threaten to raise costs and prices and to support those that will stabilize or reduce costs and prices.

The Council of Economic Advisers, in its report accompanying the President's Message, stated that the total percentage increase in total employee compensation per man-hour should not exceed the

[45] For a review of policy during 1961–1964, see pp. 382–386 of this survey.
[46] A description of the guidepost concept is contained in pp. 387–388 of this survey.

national trend rate of increase in output per man-hour (or productivity), which the Council estimated to be 3.2 percent (i.e., the average annual percentage change in productivity during 1960–1964).[47] Industry, on the other hand, should raise prices only if its productivity gains fell below the 3.2 figure. If certain industries experienced a higher productivity gain, then prices should be cut.

Although the Administration continued to emphasize the voluntary nature of the guideposts, on three different occasions in late 1965 it reacted strongly to the announcements of price increases by producers of aluminum, copper and steel. In the case of aluminum and copper, it warned producers that, because of the situation in Vietnam and because of growing inflationary pressures at home, it would release a sizeable portion of its stockpile of aluminum and copper in the market place, in order to bring about a reversal of the announced price increase. Following a series of negotiations, producers in both industries agreed to rescind their price increases.[48]

In the case of steel, where certain producers announced price increases for structural steel products, the Administration responded by saying that it would do everything in its power to shift government purchases of steel to those firms which had not gone along with the price increase. Following a series of meetings with government officials, U.S. Steel Corporation, which had not followed the lead of Bethlehem Steel and Inland Steel, announced (on January 4, 1966) that it would increase the price of structural steel by $2.75, which was considerably below the $5.00 price announced by Bethlehem and Inland Steel. Administration reaction was favorable and shortly thereafter Bethlehem and Inland followed suit. Such a reaction appeared to many people to violate the voluntary guidepost principle. Some critics went so far as to describe these actions as being "capricious and arbitrary."

Despite these efforts on the part of the Administration, prices began to show signs of accelerating increase.[49] In response to this development, the Federal Reserve Board, which had adhered to a moderately expansionary monetary policy throughout most of the economic expansion, announced in December of 1965 that it was taking two actions which it hoped would "* * * maintain price stability, and thus * * * foster balance in the economy's continued growth and strength in the dollar's international standing."

First, it approved the actions by the directors of the Federal Reserve Banks of New York and Chicago to increase the discount rate from 4 to 4½% effective December 6, 1965 (and shortly thereafter approved similar increases at the other Reserve Banks). This discount rate is the interest rate charged member banks on loans of reserves supplied by their district Federal Reserve Banks.

Second, it authorized an increase in the maximum rates that member banks may pay their depositors on "all time deposits and certificates of deposits having a maturity of 30 days or more," placing commercial banks in a more favorable position to compete for money market funds and for consumer savings that might go into savings and loan institutions.

[47] This was the first time that the Council quoted a specific compensation target.
[48] Aluminum: November 10, 1965. Copper: November 19, 1965.
[49] For a description of price patterns during 1965, see pp. 389–390 of this survey.

In taking these actions the Federal Reserve stated that it:

> * * * intended not to cut back on the present pace of credit flows but to dampen mounting demands on banks for still further credit extensions that might add to inflationary pressures * * *.

Administration reaction was immediate. President Johnson expressed "regret" that the Fed had not seen fit to forego such a decision until all of the facts on the budget to be submitted a month later were available. The Fed's reaction was that the need was immediate and that it could not postpone its action any longer. This policy split between the Federal Reserve and Administration policy marked a break in a long period of cooperation during the 1961–65 expansion.

Once the Administration had reached a final decision on its Budget for fiscal 1967, it took the position that, in light of current economic conditions and rapidly rising Vietnam costs, fiscal policy would have to be "mildly restrictive" in 1966. In addition to the decision to keep the increase in non-defense spending (on an administrative budget basis) to only $600 million, the President in his January 1966 Budget Message requested the Congress to authorize as soon as possible:

> A rescheduling of the January 1, 1966 and later excise tax reduction enacted last June for automobiles and telephone service;
> A graduated withholding system that will improve the pay-as-you-go basis of our personal income taxes without increasing tax rates or tax liabilities;
> A corresponding speed-up in payments of corporate income taxes this year and next, also without increasing tax rates or tax liabilities; and
> A method of paying self-employment Social Security taxes on a current basis.

In making this request, the President expressed the view that:

> These measures will let us stay close to a high-level balance between the revenues that the Federal Government draws out of the economy and the expenditures that it puts back into the spending stream, and to a high-level balance between total demand and the economy's capacity to produce. It is my judgment that this budget provides the appropriate fiscal environment for the maintenance of basic price stability with continued growth.

In total, the Administration estimated that these measures would raise revenues by about $6 billion from the time of enactment through fiscal year 1967. In March, Congress complied with the President's request. In its policy planning the Administration also took into account the effect of a $6 billion increase in Social Security and Medicare taxes which went into effect in January of 1966. Although it conceded that developments in the months ahead might call for greater fiscal restraint, it felt that any additional restriction at the time would be inappropriate.

Critics of the Administration's policy were somewhat divided. Almost all were concerned about such problems as inflation and the increasing burdens of defense spending at a time when the economy was operating near to capacity. But some were of the opinion that the economy was already growing at an unsustainable pace, and that, in addition to the President's proposals outlined above, a tax increase was an absolute necessity if we expected to keep the economy on an even keel. Others contended that a tax increase should be a last resort, and that first priority should be given to substantial reductions in non-defense spending.

The Administration responsed to such criticism by taking the position that a general tax increase on top of the "restrictive fiscal" measures already proposed would lead to too firm an application of the fiscal brakes, and damage to the economy. However, it should be noted that many observers felt that there was a second reason why the Administration was against a tax increase—namely, that it would be difficult politically to get Congress to agree to a tax increase without insisting on a decrease in spending on domestic programs. Having just geared up its Great Society program, the Administration was in no mood to cut spending at this time.

Concerning the economic costs of Vietnam, the Administration took the stand that our involvement in the conflict up to that point imposed "no unbearable burden on our resources." Based on its estimates, production for Vietnam amounted to about 1½ percent of the country's gross national product. Although the Administration conceded that Vietnam and high level economic activity would make it increasingly difficult to keep the economy in balance, it felt there was no economic justification for a substantial cutback in non-defense spending. In its view, the economy at the time could afford both guns and butter.

As it turned out, the Administration underestimated the cost of the Vietnam conflict by $10 billion in fiscal 1967. In its original estimate, it figured defense spending would total $60 billion in fiscal 1967; instead it rose to about $70 billion. Its projections for non-defense spending also proved to be wide of the target. On an administrative budget basis, the increase was by $3 billion instead of the modest $600 million forecasted in early 1966. Moreover, when trust fund outlays were added to administrative budget totals, total non-defense spending increased by a record $10.3 billion over fiscal year 1966.[50] Thus, rather than being "mildly restrictive" as intended, fiscal policy continued to play a highly expansionary role in the economy during 1966.

While the debate continued over fiscal policy, the Federal Reserve found it necessary to play an active role in attempting to restrain the economy as the year progressed. In the first four months of the year the nation's money stock continued to increase; but the Fed began in April to tighten the monetary screw. In July the nation's money stock actually declined slightly and then it remained static for the remainder of the year.

Tightening monetary conditions and extraordinary increases in business capital spending placed a severe crunch on credit markets,[51] causing near panic in the nation's business and financial community during August and September of 1966. Corporations running short on internal sources of funds were forced to rely heavily upon lending institutions to fund their growing capital needs. This demand, combined with increased borrowings by the United States Treasury to finance a growing budgetary deficit, resulted in a serious shortage of loanable funds. Consequently, lending institutions were forced to ration credit, disappointing many business clients who under normal circumstances would have had no difficulty in renewing maturing short-term debt or in obtaining other needed capital. Moreover, many

[50] See Table 4 in the Appendix.

[51] In 1965 and 1966, capital spending increased by 15.7 and 16.7 percent, respectively, compared to a 9.5 percent annual rate during 1961–1964.

corporations heavily dependent on short-term credit became alarmed about their ability to meet their prospective financial commitments.

This exceptional squeeze on credit markets also served to shift funds from housing to business loans, virtually drying up the sources of available mortgage credit by mid-1966. Since the housing industry was already in a severe slump, the added effects of reduced credit resulted in a decline in new housing starts in October 1966 to an annual rate of 848,000, the lowest level since 1945.

Pressed by these heavy demands for credit, interest rates, both short and long term, rose steadily through the fall of 1966, and long term rates reached their highest level in 40 years. Credit rationing and these higher interest charges had a marked effect not only on housing but also on small business borrowers, many of whom were unable to establish credit in competition with big business borrowers.

The capital investment boom, the depression in housing, the growing confusion in the money markets, rising prices in many sectors of the economy, and the unanticipated sharp increase in Vietnam spending combined to create severe imbalance in the economy. Hence the President on September 8, 1966 sent a special Economic Message to Congress requesting that it enact legislation which would authorize a sixteen month suspension of the seven percent business investment tax credit and the use of accelerated depreciation on all buildings and structures started or transferred on or after September 1, 1966. Clearly these special incentives for plant and equipment investment and commercial construction were destabilizing forces.

The President's objective was to achieve a marked reduction in the pace of business spending for new plant and equipment, which had been continuing at an unsustainable pace, and hopefully to redirect funds to the housing sector. This legislation, with a few modifications, such as shifting the effective date to October 10, was promptly enacted by the Congress. In the same Message, the Administration stated that it would apply additional fiscal restraint by reducing low priority spending by some $3 billion during the remainder of the current fiscal year (fiscal year 1967).

The Congress took action in September 1966 on legislation intended to limit the further escalation of interest rates, and restrain the growth of commercial bank credit to a more moderate pace. Competition between commercial banks and savings and loan associations for personal savings during the year had reduced the ability of savings and loan associations to lend on mortgages, which resulted in a 10 percent reduction of building activity. The savings and loan associations suffered several net outflows of savings after quarterly dividend dates and were compelled to borrow several billions of dollars from the home loan banks. Commercial bank loans to business, on the other hand, had grown at an annual rate of 20 percent, and credit-financed business spending had grown at a pace that the Federal Reserve considered unsustainable, constituting an appreciable addition to current inflationary pressures.

These conditions prompted Congress, supported by Federal banking supervisory agencies, to enact temporary legislation to: (1) set different maximum interest rates on deposit-type accounts according to size, geographic area, or other differences; (2) provide a wider range of reserve requirements on time deposits in member banks; and (3)

authorize the Federal Reserve to buy and sell Home Loan Bank and other obligations in order to support the mortgage market indirectly. This legislation furthermore enabled the Federal Home Loan Bank Board, for the first time in its history, to place interest rate ceilings on funds deposited in savings and loan associations.

When this law had been signed, the Federal Reserve Board immediately reduced the maximum interest rate on certificates of deposits of less than $100,000, and the Home Loan Bank Board established maximum interest rates on savings and loan accounts, permitting a differential in favor to western states.

As noted earlier, near-panic developed in credit markets in the late summer and early fall of 1966, and there was increasing evidence that the economic expansion was showing signs of slowing down. Consequently late in 1966, the Federal Reserve, in a nearly unprecedented manner, gave clear indication to the nation's financial interests that it would strive to ease monetary conditions and would continue to pursue such a policy as long as the economy was orderly and noninflationary. Although there was no appreciable easing of the monetary situation before the end of 1966, the fact that monetary policy was shifting from extreme restraint to greater ease seemed to have a positive psychological effect on the nation's financial markets, calming fears of further deterioration in the monetary situation.

In addition to its policy of "mild fiscal restraint," the Administration re-emphasized the importance of the guidepost principle, urging both labor and industry to exercise moderation in their wage and price decisions. As the year progressed, organized labor expressed increasing opposition to the guideposts, arguing that they were meaningless and unworkable since inflation would more than offset the 3.2 percent wage increase recommended by the Administration. Many industries, too, were finding it more difficult to conform to the Administration's wishes, contending that they could no longer absorb rising labor and material costs and maintain adequate profit margins.

Given this changing environment. the Administration soon found that its success of previous years in keeping unit labor costs fairly stable was unlikely to continue in the year 1966. Throughout 1966 the guidelines were violated at will on numerous occasions, as exemplified by the wage agreements following the transportation strike in New York City in January of 1966 and the mid-summer strike of machinists against the several major airlines, both of which far exceeded the 3.2 percent figure. Increases in prices of sheet and strip steel of $2 to $3 per ton in August of 1966 also were considered a violation of the guideposts.

Thus, by the end of the summer of 1966, opinion was fairly widespread that the guidepost concept, which held up reasonably well in a period when costs and prices were relatively stable, had failed. Unit labor costs in the private nonfarm economy, following several years of relative stability, increased by 2.5 percent in 1966—the largest increase in six years.[52]

In sum, 1966 proved to be a highly eventful and troublesome year for the Administration economic policy. The policies and objectives outlined at the beginning of the year were considerably altered by greater increases in Vietnam war costs than had been anticipated. A

[52] See Table 3 in the Appendix.

policy split arose with the Federal Reserve over tight money. Serious trouble spots developed in various areas of the economy, especially in housing and capital markets, as credit became scarce and interest rates soared. The wage-price guideposts lost their effectiveness and were eventually abandoned as an anti-inflation measure. Finally, though inflation did not get terribly out of hand during 1966, it became apparent that the fiscal excesses of 1966 would trigger a more serious rise in prices in 1967, if needed restraints were not placed on the economy in the coming year.[53]

The Belated Shift to Economic Restraint, 1967–68

Evidently realizing that it had erred in not applying greater economic restraint in 1966, the Johnson Administration in January 1967 called for a general tax increase in the form of a surcharge on individual and corporate income taxes. However, in doing so, it recommended that the tax increase not become effective before July 1, 1967. This was done because the economy was already in the midst of a slowdown—or a "mini-recession" as some termed it—which the Administration expected to continue through the first half of the year.

The slowdown was due to the depressing effects of a massive buildup of business inventories, the ending of the business investment boom, and a nosedive in homebuilding. Price rises also slackened during this period. Moreover, by the spring of the year business investment activity had fallen off so sharply that the Congress, at the Administration's request, reinstated the investment credit in the hope of preventing a further decline in business spending for plant and equipment.

Despite these conditions, the Administration indicated it was confident that the economy would rebound in the second half of 1967 because of continuing sharp increases in defense spending and the working off of excessive business inventories. Thus it was believed that additional fiscal restraint would be needed later in the year.

The economy did rebound as expected by mid-year. The recovery exceeded expectations and at the same time defense spending requirements had to be scaled up to pay for the war effort. Because of these developments, the Administration recommended a temporary 10 percent surcharge on individual and corporate incomes instead of the 6 percent rate originally suggested. The measure was sent to Congress in August 1967 with the hope that it would act promptly on the matter. It did not act, however, because many in Congress felt strongly that a tax increase should not be given serious consideration until the Administration came up with an effective plan for reducing federal spending. Many Congressmen felt that it was unfair to impose higher taxes when, in their view, the main problem was excessive federal spending.

President Johnson, on the other hand, was opposed to spending cuts. This caused a stalemate and the tax request died in committee. In killing the measure, Representative Wilbur Mills, Chairman of the House Ways and Means Committee—supported by a committee vote of 20 to 5—made it clear to the President that a tax increase would not be approved until an acceptable expenditure reduction plan was submitted by the Administration.

[53] For a description of price patterns during 1966, see pp. 390-391 of this survey.

Because of Congressional inaction on the President's tax request, the federal deficit soared to $12.4 billion (on a national income accounts basis) during 1967. Monetary policy also continued to be highly expansionary during the year, as reflected by a 6.6 percent increase in the money stock, higher than any annual increase recorded during the 1948–1967 period (see Tables 2 and 6 in the Appendix). This extraordinary fiscal stimulus, reinforced by an easing of monetary conditions, had a predictable impact on the economy in the second half of 1967. By any standard the economy became overheated by year end. Unemployment fell to 3.7 percent. Consumer prices increased at a 4 percent annual rate (seasonally adjusted), compared to a 2.1 percent rate in the first half of the year.[54] It was fully expected that mounting excess demand would intensify inflationary pressures in 1968.

Belatedly, both the Administration and the Congress agreed that drastic fiscal action would have to be taken in 1968 to combat spiraling inflation and numerous other ills facing the economy. In January 1968 the President resubmitted his 10 percent surcharge package which his Economic Advisers estimated would raise tax revenues by $3 billion in fiscal 1968 and $13 billion in fiscal 1969. His budget for fiscal 1969 called for more than a $3 billion rise in defense outlays and a "hold the line" expenditure policy for most non-defense programs. However, the Congress expressed immediate dissatisfaction with this fiscal formula. It insisted that a tax increase would not be granted until agreement was reached on mandatory cutbacks in federal spending.

Following several months of bitter debate, the Congress in mid-1968 finally enacted the Revenue and Expenditure Control Act of 1968 which approved the Administration's tax program (including the 10 percent surcharge, extension of certain excise taxes, and an acceleration of corporate tax payments). In addition, the Act required the Executive Branch to reduce controllable federal spending by $6 billion in the fiscal 1969 budget, to cut projected fiscal 1969 appropriations by $10 billion, to rescind $8 billion of unspent prior year appropriations and to reduce federal civilian employment by approximately 245,000 workers. The tax package, on the other hand, was expected to produce an additional $15 billion in revenues before its scheduled expiration on July 1, 1969. These measures constituted, at long last, a shift toward active fiscal restraint.

Because of the delay in getting the tax package approved by Congress, the Federal Reserve found it necessary to tighten credit during the first half of 1968. The Fed attempted to apply enough restraint to help in cooling off a feverish economy, and yet stand ready to take on the full burden of economic restraint if the Administration failed to get its tax increase. In its 1969 *Annual Report* (submitted in January 1969), the Council of Economic Advisers gave the following account of the Fed's action:

> Within these limitations, a series of actions did, in combination, achieve significant restraint.
>
> Two half-point increases brought the Federal Reserve discount rate to a modern high of 5½ percent by late April. Regulation Q was also changed in April to raise the maximum allowable interest rates that banks could pay on time certificates of deposit. Open market operations brought pressures on bank reserve positions sufficient to slow bank credit growth to a 6½ percent annual rate in the first half of the year, compared with an 11½ percent increase in 1967. In the first half of

[54] For a description of price patterns during 1967, see pp. 391–392 of this survey.

1968, total funds raised in credit and equity markets were 17 percent below the volume of the last half of 1967. Interest rates in the open market moved sharply upward. By late May, the rate on 3-month Treasury bills reached 5.90 percent and high-grade corporate bonds commanded more than 7 percent—above the highs during the 1966 credit crunch.

Interest rates fell for a time after the logjam on the tax bill broke in late May. The Federal Reserve followed this with some relaxation of its grip on bank reserve positions in June and July. In mid-August, the discount rate was reduced to 5¼ percent, largely in technical realignment to lower market rates.

The initial easing of pressures on the banking system set off widespread expectations that monetary policy would soon be eased still further. The resulting increased demand for securities to capture potential capital gains drove interest rates sharply downward. Meanwhile, the demands for credit to finance security purchases were added to the already heavy credit demands from the Treasury and the private sector, with the result that growth of bank credit accelerated sharply after midyear. [55]

Following the enactment of the revenue and expenditure control package in June 1968, the Federal Reserve, fearing possible fiscal overkill, eased its restraint on money markets. However, as subsequently related by Arthur Okun, Chairman of the Council of Economic Advisers during this period, this action proved to be counter productive:

Because the outlook for homebuilding seemed bleak and that for the economy as a whole appeared moderate, the Federal Reserve celebrated the enactment of the fiscal program with some easing, supporting and following bullish developments in financial markets. This turned out to be the wrong policy because it was the right policy for what turned out to be the wrong forecast. And, in believing that erroneous forecast, the Federal Reserve has lots of company—at the Council and among other government forecasters and business economists. The monetary decisions made in the summer and fall of 1968 could not conceivably have had a significant influence on economic activity during 1968, but they did contribute to continued overexuberance in 1969. [56]

Finally, there were some who felt that controls should be placed on wages and prices during 1968. In its 1968 *Annual Report*, the Council of Economic Advisers expressed strong disagreement with this view:

The most obvious—and least desirable—way of attempting to stabilize prices is to impose mandatory controls on prices and wages. While such controls may be necessary under conditions of an all-out war, it would be folly to consider them as a solution to the inflationary pressures that accompany high employment under any other circumstance. They distort resource allocation; they require reliance either on necessarily clumsy and arbitrary rules or the inevitably imperfect decisions of Government officials; they offer countless temptations to evasion or violation; they require a vast administrative apparatus. All these reasons make them repugnant. Although such controls may be unfortunately popular when they are not in effect, the appeal quickly disappears once people live under them. [57]

The Council did, however, reaffirm its support of the guidepost principle (with some modifications). Yet, it realized that it was unrealistic to expect widespread public support for this concept when it was clear that excessive government spending was the principal cause of the sharp increases in wages and prices.

History has shown that the belated shift to active fiscal restraint in mid-1968 had no immediate impact on the pace of economic activity during the remaining months of 1968. Business investment and personal consumption continued to surge. Unemployment fell steadily to 3.3 percent by year end—the lowest level since October 1953.

[55] U.S. *President*. Economic Report of the President; transmitted to the Congress January 1969; together with the Annual Report of the Council of Economic Advisers, 1969, p. 39.

[56] Arthur M. Okun, *The Political Economy of Prosperity*, The Brookings Institution, 1969, pp. 93–94.

[57] U.S. *President*. Economic Report of the President; transmitted to the Congress February 1968; together with the Annual Report of the Council of Economic Advisers, 1968, p. 119.

Both short and long term interest rates rose to new heights. And consumer prices rose by a seasonally adjusted annual rate of 4.8 percent, compared to 4.0 percent during the second half of 1967. Though these pressures were mainly the product of past errors in economic policy, the Johnson Administration had expected some moderation in private demand pressures, interest rates, and price increases during the second half of 1968.

Nixon Administration "Game Plan," 1969–August 1971

When the Nixon Administration assumed office in January 1969, it was generally agreed that monetary and fiscal policy would have to keep a tight rein on the economy during the coming year. The Federal Reserve Board, having seriously misjudged the economic situation in the summer and fall of 1968, shifted to a policy of monetary restraint by the end of the year. In setting the tone for monetary policy, Federal Reserve Board Chairman William McChesney Martin in early 1969 said, "The intensification of this restraint has been gradual, rather than abrupt, in keeping with our assessment of the economy's needs over the long term." [58] It was believed that this action in conjunction with appropriate fiscal restraint would lead to the gradual cooling off of excess demand pressure in the economy. This would mark a first step in the longer term task of halting inflation while assuring a sustainable rate of economic expansion in the attempt to avoid a serious rise in unemployment.

In his final Budget Message to Congress, President Johnson recommended a fiscal program designed to hold total federal spending within the bounds of avilable revenues, yielding a surplus of $3.4 billion. He also called for a one year extension of the 10 percent surcharge, from July 1, 1969 to June 30, 1970. In the President's view this policy of restraint was ". . . essential to safeguard the purchasing power of the dollar and its strength throughout the World . . . The need for continued fiscal restraint is agreed upon by all informed opinion in both our political parties." [59] He went on to say:

> The immediate task in 1969 is to make a decisive step toward price stability. This will be only the beginning of the journey. We cannot hope to reach in a single year the goal that has eluded every industrial country for generations—that of combining high employment with stable prices.
>
> * * * * * * *
>
> Price stability could be restored unwisely by an overdose of fiscal and monetary restraint. This has been done before, and it would work again. But such a course would mean stumbling into recession and slack, losing precious billions of dollars of output, suffering rising unemployment, with growing distress and unrest. It would be a prescription for social disaster as well as for unconscionable waste.

The Johnson Administration cautioned, however, that monetary and fiscal policy could not be relied upon as a sole means of reducing inflation and maintaining relatively full employment. As a necessary supplement to these policies, both labor and industry should be encouraged to observe voluntary standards of price and wage behavior

[58] U.S. *Congress. Joint Economic Committee.* The 1969 Economic Report of the President. Hearings . . . 91st Congress, 1st. Sess., part 3, p. 647.

[59] U.S. *President.* Economic Report of the President; transmitted to the Congress January 1969; together with the Annual Report of the Council of Economic Advisers, 1969, pp. 8–10.

which would be generally in line with the nation's gains in productivity. Particular attention should be given to powerful economic interests which are not normally subject to the discipline of competitive markets in fixing wages and prices.

Generally, the Nixon Administration agreed that monetary and fiscal restraint was appropriate in 1969 to assure continued high employment and "achieve a continuous moderate reduction of the rate of inflation." In developing its strategy—or "game plan" as it preferred to term it, the new Administration operated under the following assumptions. A combination of monetary and fiscal restraint would gradually slow the pace of the economy. In the short run, a deceleration in the rate of growth in real output would cause a decline in productivity. This in turn would cause a rise in unit costs and a corresponding narrowing of profit margins. Businesses would respond by cutting costs and would refrain from raising prices at will. At the same time, businesses would become more resistent to labor's wage demands. On the other hand, a softening of labor markets was expected to lessen workers' demands for large wage increases.

Hence, when it had become clear that the wage-price spiral had been broken and the rate of price rise had moderated, monetary and fiscal policy could be eased to promote a quicker expansion and a return to full employment. Because of the absence of excess demand conditions in the economy, prices would achieve relative stability.

The Administration expected a moderate deceleration of economic activity during the first half of 1969, without any appreciable impact on the general level of prices. A slower price rise was expected during the second half of the year as a result of a further softening of the economy. Thus, by year end the Administration expected price increases to be less than they had been earlier in 1969.

Concerning the question of wage-price guideposts, President Nixon in his first press conference made it clear that the Administration had no intention of using this method as a means of dealing with inflation. He said:

> I do not go along with the suggestion that inflation can be effectively controlled by exhorting labor and management and industry to follow certain guidelines. I think that is a very laudable objective for labor and management to follow. But I think I am aware of the fact that the leaders of labor and the leaders of management, much as they might personally want to do what is in the best interests of the nation, have to be guided by the interests of the organizations that they represent.[60]

In the view of many students of policy, the President in this instance committed a serious tactical error. At best, they said, he should have remained non-committal on the question of guideposts until a determination could be made as to how well monetary and fiscal policies were doing their job in combatting inflation.

Following his review of the Johnson Budget, President Nixon in April 1969 sent a revised budget in which he pledged to hold spending to $192.9 billion, compared to the Johnson estimate of $195.3 billion. The budget would be in surplus to the amount of $5.8 billion, which was $2.4 billion above the Johnson estimate.[61]

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[60] Press Conference, January 27, 1969. *In* Weekly Compilation of Presidential Documents, February 3, 1969 (Vol. 5, No. 5), p. 180.

[61] Actual Federal spending totalled $196.6 billion in fiscal 1970, resulting in a deficit of $2.8 billion.

To complete his fiscal package, the President requested repeal of the 7 percent investment tax credit, extension of the surtax at the 10 percent level through December 31, 1969, followed by a reduction in the rate to 5 percent, effective January 1, 1970. In August, Congress granted continuation of the 10 percent surcharge in the second half of 1969. The extension of the surcharge at a 5 percent rate through the first half of 1970 and repeal of the investment tax credit were provided for in the Tax Reform Act of 1969, passed by Congress in December of 1969.

Monetary policy remained highly restrictive throughout most of 1969. The Federal Reserve raised the discount rate—the rate the Fed charged member banks—to 6 percent, the highest level in 40 years. This prompted commercial banks to increase their prime rates—the rate the banks charged favored customers—to a record 8.5 percent in June 1969. Over the year total bank time deposits actually declined while the money stock (demand deposits and currency outside banks) rose by a modest 3.2 percent, compared to a 7.8 percent gain in 1968. Moreover, member bank free reserves reached a net deficit of $829 million, the highest deficit recorded since 1952.[62]

As expected, monetary and fiscal restraint effectively slowed the pace of the economy during 1969. Real output expanded by only $13 billion during the first 3 quarters of the year, and in the fourth quarter output actually dropped by $4 billion. Despite this slackening of economic activity, inflation continued unabated. Over the year prices rose by more than 6 percent. Interest rates, both short and long term, rose to record highs. Unemployment by year end stood at 3.5 percent, which was below the 4 percent level anticipated by Administration policy makers.

Because of these conditions, the Nixon Administration in its first Economic Report, declared that economic policy in 1970 would have two objectives: (1) to reduce the rate of inflation and (2) to revive the growth of real output in the economy. In its *Annual Report,* the Council of Economic Advisers acknowledged that these objectives would be difficult to reconcile:

> Measures that would assure the most rapid stabilization of the price level would almost certainly force a sharp contraction of production and employment. But there is a path of moderate expansion of demand which will yield both a decline of the rate of inflation and a resumption of growth of output. The task for economic policy in 1970 is to achieve that path.[63]

According to this interpretation, the impact of restrictive monetary and fiscal policies followed in 1969 was expected to carry over through the first half of 1970, creating further softening in the economy. However, the performance of the economy in the second half of the year would depend heavily on new policy actions taken before mid-year. The Administration's "game plan" for 1970 called for adjustments in monetary and fiscal policy which by the second half of the year would encourage a resumption of real output growth, prevent a serious rise in unemployment and yet assure a decline in the rate of inflation.

Specifically, fiscal policy should aim for a modest surplus, while monetary policy should temper the severe restraint of the latter part of 1969 and should take only a moderately restrictive course in 1970.

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[62] See Table 2 in the Appendix.

[63] U.S. *President.* Economic Report of the President; transmitted to the Congress January 1970; together with the Annual Report of the Council of Economic Advisers, 1970, p. 57.

With the two-stage lifting of the income tax surcharge during 1970, other revenue reducing reforms and the 15 percent increase in social security payments, all of which were approved by the Tax Reform Act of 1969, the Administration deemed it necessary to keep the fiscal 1971 budget mildly restrictive. Hence, it placed a ceiling on spending which would guarantee a $1.3 billion surplus.

On the question of monetary policy, the "game plan" called for a rate of monetary expansion that would fall between the extreme ease of 1967 and 1968 and the severe restraint imposed during 1969. The Administration, however, did not attempt to pinpoint an appropriate rate, "* * * because of uncertainty about the adjustment of the economy to the lower demand for money resulting from high interest rates, inflationary expectations, and the development of new money substitutes. In these circumstances policy must be cautious and tentative and feel its way along." [64]

It was generally agreed that monetary and fiscal policy would have to shoulder the primary burden of stabilizing the economy during 1970. However, there was a growing consensus among students of the economy that the dual objective of relative price stability and relative full employment could not be met unless the Administration adopted an activist wage-price policy as well. In their view, cost-push pressures—reinforced by the existence of widespread inflationary expectations—were intensifying throughout the economy,[65] despite a cyclical downturn in economic activity. Accordingly, the Joint Economic Committee in its 1970 *Economic Report* repeated its long standing contention that—"a consciously enunciated price and incomes policy must become a standard part of the policy mix." Specifically it recommended that:

> The Council of Economic Advisers should at once initiate consultations with labor and business regarding appropriate price and income behavior. Following such consultations, the Council should publish promptly a set of specific quantitative standards for price and income changes. The standards should be such that voluntary compliance by business and labor will contribute to restoration of greater price stability.[66]

However, the Nixon Administration remained firm in its opposition to such proposals, expressing full confidence that the "game plan" would succeed in meeting its objectives.

Faced with the problem of mounting inflation and unemployment the President, in what might be termed a minor concession to his critics, announced three actions in June of 1970 designed to enable the government to monitor more closely inflationary conditions in the economy. First, he created a National Commission on Productivity, composed of representatives of business, labor, the general public, and the Federal Government. Its basic function was to make studies of productivity problems in the economy and recommend to the President policies to speed up the rise in national productivity. Second, he announced the creation of a Regulations and Purchasing Review Board which was charged with reviewing the impact of inflation on

[64] U.S. *President.* Economic Report of the President; transmitted to the Congress January 1970; together with the Annual Report of the Council of Economic Advisers, 1970, p. 60.

[65] For a description of cost-push patterns during this period, see p. 393 of this survey.

[66] U.S. *Congress. Joint Economic Committee.* 1970 Joint Economic Report. Report of the Joint Economic Committee on the January 1970 Economic Report of the President together with Statement of Committee Agreement, Minority, Supplementary, and Dissenting Views. March 25, 1970. 91st Congress, 2nd Sess. (House Report No. 91-972), p. 21.

federal procurement practices. Third, he instructed the Council of Economic Advisers to prepare periodic inflation alerts to spotlight "specific cases or general features of exceptionally inflationary wage and price behavior."

The Council published two alerts during the second half of 1970. The first, issued in August 1970 stressed the importance of increasing productivity as the means of reducing cost and price pressures in the economy. The Council expressed particular concern over the alarming rate of increase in wages in the construction industry. The second alert, issued in December 1970, criticized wage increases granted auto and railroad workers and price increases in certain industries, particularly autos and fuels. Of major concern, however, was the 22.1 percent wage adjustment in construction union settlements in the third quarter. Meanwhile, in the industry as a whole, which includes a substantial nonunion element, the seasonally adjusted unemployment rate was 11.9 percent in October.

During the first half of 1970 consumer prices continued to rise at a annual rate of 6 percent, with no signs of improvement on the horizon. This prompted the Congress in August 1970 to enact legislation granting the President blanket authority to control wages, prices, rents and salaries. This authority, contained in the Defense Production Act Amendments of 1970, was signed into law by the President in August 1970, despite his strong disapproval of the measure. He made it clear that he had no intention of using the authority to freeze wages and prices because such action "simply does not fit the economic conditions which exist today."

This attitude of the President did not however deter those who were becoming more convinced that additional action was needed. In November 1970, the Committee for Economic Development (CED) issued a policy statement of its Research and Policy Committee which concluded that:

> The adoption of voluntary wage-price or "incomes" policies in our view constitutes the most promising approach to the problem at this time. Such policies are directed only at firms and labor groups with some market discretion, and are particularly concerned with dealing with "cost-push" when there is no excess in total demand. They should not be confined to the manufacturing sector but can extend to other important areas where some leeway in wage or price setting exists, including industries which are not predominantly unionized. Under such policies, the government or a government-sponsored group defines the wage and price behavior that is conducive to or consistent with overall price stability; seeks to enlist the voluntary cooperation of business and labor in exercising the needed restraint; and calls the public's attention to significant instances of excessively inflationary behavior.
>
> Since the wage-price policies described here are based on voluntary cooperation, they involve far less extensive and detail intervention in economic decision-making processes than direct controls. Those who favor such voluntary policies regard them as a means of avoiding eventual imposition of compulsory wage and price restraint, rather than as a step in this direction.[67]

In making this proposal, the CED was quick to add that such a policy should also take into account the need for concerted governmental action against a number of longer term structural obstacles to price stability which are not readily affected by changes in aggregate demand. These would include, for example, the effects of undue

[67] Committee for Economic Development. *Further Weapons Against Inflation: Measures to Supplement General Fiscal and Monetary Policies*. A Statement by the Research and Policy Committee. November 1970, p. 53.

economic concentration in certain areas of the economy, costly outdated features of laws relating to labor-management relations, other outdated government economic regulations, inadequate job training and placement programs supported by public and private interests, and unnecessary lags in productivity advancement in many of the nation's important industries, including services.

In a similar vein, Federal Reserve Board Chairman Arthur M. Burns, declared in a major policy address in December of 1970: "In a society * * * which rightly values full employment, monetary and fiscal tools are inadequate for dealing with sources of price inflation such as are plaguing us now * * *" Accordingly, he recommended that "* * * it would be desirable to supplement monetary and fiscal policies with an incomes policy, in the hope of thus shortening the period between suppression of excess demand and the restoration of reasonable relations of wages, productivity and prices." [68] Though Chairman Burns differed officially with the Administration on this issue in May of 1970,[69] this was the first time he presented a detailed outline of his proposed wage-price policy.

By the end of the year, it was clear that the "game plan" had failed in its mission to produce tangible improvements in the economy. Instead of a recovery in the second half, as was expected, real output declined. This mild economic recession was due largely to widespread cutbacks in business and consumer spending. The extended General Motors strike in the late summer and fall of 1970 also had a dampening influence on economic activity in the latter part of the year. Reflecting the effects of this economic slowdown, including the impact of massive defense worker layoffs resulting from the winding down of the Vietnam conflict after 1968, unemployment rose sharply to a seasonally adjusted rate of 6.1 percent by December, compared to a 3.5 percent rate one year earlier. Business investment, in real terms, was little changed from 1969, and consumers expressed a growing lack of confidence in the economy's ability to cope with rising unemployment and inflation. This was demonstrated by a marked slowdown in consumer buying and a consequent sharp rise in personal savings to a rate of 8.3 percent of total disposable personal income—the highest rate since 1945.

A period of ease in monetary policy did have a favorable impact on credit markets during 1970. The rate of expansion in the money supply over the year was relatively high. Moreover, the Federal Reserve discount rate and commercial bank prime interest rates were reduced in stages, and short and long term interest rates fell sharply over the year. However, these developments were not enough to prevent the economy from experiencing mild recession during the year. Hence, by any standard, 1970 was a poor year for Administration policy.

Despite the disappointing performance of the economy in 1970, the Nixon Administration expressed confidence that the economy would rebound strongly during 1971. In its *Economic Report* to the Congress in January 1971, it projected that the nation's total output would increase to a level of about $1,065 billion for the year. In its view this sharp rise in current dollar GNP would be consistent with its stated goal of reducing the unemployment rate to a "zone of 4½ percent" and the rate of inflation to 3 percent by the middle of 1972. The Admin-

[68] *The Basis for Lasting Prosperity.* Address given at Pepperdine College, December 7, 1970.
[69] *New York Times.* May 19, 1970, p. 1.

istration acknowledged that this was a more ambitious goal than the $1,045 billion to $1,050 billion range in GNP being forecast by most students of the economy at the time.[70] Nevertheless, it felt that this 9 percent gain in total output "was feasible, and its realization with the proposed budget and complementary monetary policy is a reasonable expectation." [71]

There was general agreement among economists in and out of Government that fiscal and monetary policies should be expansionary during 1971. Accordingly, the Nixon Administration presented a budget calling for a $16.4 billion increase in total Federal outlays during the coming fiscal year (fiscal year 1972). This increase, given a more modest rise in total revenue, would yield a deficit amounting to about $11.6 billion.[72] Administration policy makers reasoned, however, that this deficit would not be inflationary since spending would not exceed the revenues the economy could generate under the existing tax system at a time of *full employment*. Hence the budget for fiscal 1972 was estimated to be in balance under full employment conditions. In officially adopting the full employment concept as a measure of fiscal impact, the President noted: "The full employment budget is in the nature of self-fulfilling prophecy: by operating as if we were at full employment, we will help to bring about that full employment." He went on to say, "The 1972 budget reaffirms the determination of the Federal Government to take an activist role in bringing about the kind of prosperity that has rarely existed in the American economy—a prosperity without war and without runaway inflation." [73]

In setting the tone for monetary policy, Federal Reserve Board Chairman Arthur F. Burns, testified before the Joint Economic Committee in February 1971 that monetary policy should provide for continued expansion. He noted that the money supply, narrowly defined (i.e., demand deposits plus currency outside banks), expanded by 5.5 percent during 1970, a rate exceeded in four other years since the end of World War II. He cautioned, however, that rates of increases in the money supply above the 5 to 6 percent range—if continued for an extended period—had served to intensify inflationary pressures in the past. He also noted that modest increases in the money supply had played a major role in the past in promoting a strong cyclical recovery in production and employment. Nevertheless, he did acknowledge that:

> We cannot, of course, be confident that history will repeat itself. If the income velocity of money does not rise in 1971, in line with past cyclical patterns, then relatively larger supplies of money and credit may be needed. One of the great virtues of monetary policy is its flexibility, so that adjustments can be made rapidly to unexpected developments. The Federal Reserve will not stand idly by and let the American economy stagnate for want of money and credit. But we also intend to guard against the confusion, which sometimes exists even in intellectural circles, between a shortage of confidence to use abundantly available money and credit, on the one hand, and an actual shortage of money and credit, on the other. [74]

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[70] Actual GNP for 1971 totalled $1,050 billion.

[71] U.S. *President.* Economic Report of the President; transmitted to the Congress February 1971; together with the views of the Council of Economic Advisers. 1971, p. 85.

[72] The actual rise in total outlays amounted to $20.5 billion in fiscal 1972, yielding a deficit of $23.2 billion.

[73] U.S. *President.* The Budget of the United States, Fiscal Year 1972; transmitted to Congress January 1971, p. 7.

[74] U.S. *Congress. Joint Economic Committee.* The 1971 Economic Report of the President. Hearings 92nd Congress, 1st Session, part 1, p. 244.

Chairman Burns at the same time assured the Committee that "* * * the Federal Reserve will not become the architect of a new wave of inflation." [75]

Moreover, because the economy faced the unique problem of entering a recovery phase while inflation remained exceptionally high, Chairman Burns reaffirmed his position that expansionary monetary and fiscal policy should be supplemented by an activist Government wage-price policy. "If I read the national mood correctly, widespread public support now exists for vigorous efforts to bring wage settlements and prices in our major industries within more reasonable bounds. Such efforts should bolster consumer and business confidence, and thus contribute materially to getting our economy to move forward again." [76]

The Nixon Administration, however, continued to express firm opposition to this and other similar proposals, saying that:

> There is now a great deal of experience to indicate that the superficially attractive route of voluntary controls is unlikely to lead to a solution. By "voluntary controls" is meant a system in which the Government, or a quasi-independent board selected by the Government, specifies comprehensive standards of wage-price policy to be observed voluntarily by labor and business, without any similarly comprehensive means of enforcement by Government. The basic deficiency in this approach is that it counts on a large number of people to acquiesce in conduct that they find contrary not only to their own interests but also to their view of fairness, propriety, and efficiency. The great initial attraction of the idea, that it makes the public think something effective is being done, is also one of its adverse consequences because it distracts attention from the real nature of the problem.[77]

On the other hand, the Administration in early 1971 did take steps against three industries whose wages and prices, in its view, were gaining at a rate that could threaten the success of its anti-inflation program. First, it sought to increase the supply of oil by relaxing limitations on imported oil from Canada and permitting the production of oil on Federal offshore leases without restriction by State regulatory commissions. Second, it succeeded in encouraging the steel industry to rescind part of its recent price increases for structural steel. And third, the President made it clear that the nation would not tolerate a continuation of runaway labor costs in the construction industry. To assist in this matter, he met with workers and employers and asked them to submit a plan for stopping the wage-price spiral in the industry.

Moreover, in February 1971, the Administration modified its position with respect to standby wage-price control authority. Treasury Secretary John B. Connally, in testimony before the House Banking and Currency Committee, stated that the Administration would support an extension (through March 31, 1973) of such standby authority provided under the Economic Stabilization Act of 1970. He added, however, that—" * * * we do not believe that a network of general wage-price controls is needed at this time, nor do we believe that the American people would long stand for such regimentation, under present circumstances." [78]

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[75] *Ibid.*
[76] *Ibid.* p. 245.
[77] U.S. *President.* Economic Report of the President . . . February 1971. *Op. cit.*, p. 79.
[78] U.S. *Congress. House. Committee on Banking and Currency.* To extend standby powers of the President to stabilize wages, prices and the authority of the Federal Reserve Board and the Federal Home Loan Bank Board to establish flexible interest rates on time deposits. Hearings. February 23, 24, 25 and 26, 1971. 92nd Congress, 1st Session, p. 5.

When it became apparent that the Administration could not get workers and employers in the construction industry to agree to a voluntary program of cost restraint, the President in late February 1971 suspended the Davis-Bacon Act, which required contractors on Government funded, assisted, or insured construction to pay prevailing union wage scales. After further negotiations with labor and management interests in the industry, the Administration succeeded in getting the parties to agree to a cooperative program of cost restraint. On March 29, 1971 the President reinstated the Davis-Bacon Act and issued Executive Order 11588 which formalized the stabilization program on which the Administration and industry representatives had agreed. Using the control authority provided under the Economic Stabilization Act of 1970, as amended, the President created the Construction Industry Stabilization Committee—composed of twelve members, four each representing labor, management, and the public. The Committee was given the authority to take steps designed to stabilize wages and prices in the construction industry. Specifically, all changes in the economic provisions of all new collective bargaining agreements in the industry required approval by the Committee before they could be put into effect. Before most of the cases were submitted to the Committee they were subject to review by one of 17 joint labor-management craft dispute boards, representing various segments of the industry.

By mid-year it became clear that the Administration's efforts to reduce inflation and unemployment were actually yielding progressively poorer results. Despite a sharp cyclical decline in unit costs in the private sector of the economy during the first half of the year, consumer prices—following moderate gains in the first three months of the year—rose by a 4.8 percent annual rate (seasonally adjusted) during the second quarter of 1971. Wholesale prices, spurred on by a strong recovery in farm prices rose by a seasonally adjusted rate of 5.0 percent during the first six months of the year. Moreover, the GNP price deflator increased by a rate of 5 percent from fourth quarter 1970 through second quarter 1971. These disturbing price trends served once again to reinforce inflationary expectations in the economy.

Unemployment, despite a respectable rise in real GNP, remained fixed at about a 6 percent rate (seasonally adjusted) during the first six months of 1971. Meanwhile, business investment in real terms grew little, though profits, cash flow and credit availability had all improved markedly. The lack of business confidence of which this gave evidence was reinforced by consumer uncertainty about the outlook for inflation and unemployment. Instead of saving less and buying more as the Administration had expected, the consumer increased his rate of savings. By the second quarter of 1971 savings as a percent of total disposable personal income had risen to a seasonally adjusted rate of 8.6 percent. When compared to other years in the postwar period, this rate was exceeded only by the 9.5 percent rate recorded in 1946, which was actually a year in which consumers were in the process of reducing their savings rate from peak levels reached during the war years.

Given these circumstances, Chairman Burns of the Federal Reserve Board in testimony before the Joint Economic Committee in late

July 1971 expressed a view which seemed to reflect the feeling of many at the time:

> A year or two ago it was generally expected that extensive slack of resource use, such as we have been experiencing, would lead to significant moderation in the inflationary spiral. This has not happened, either here or abroad. *The rules of economics are not working in quite the way they used to.* Despite extensive unemployment in our country, wage increases have not moderated. Despite much idle capacity, commodity prices continue to rise sharply. And the experience of other industrial countries, particularly Canada and Great Britain, shouts warnings that even a long stretch of high and rising unemployment may not suffice to check the inflationary process. [Italics added.] [79]

Hence, in the view of Chairman Burns, the Administration's "game plan" for the economy over the past 2½ years had not succeeded in its objective. New tools were needed, to be used in conjunction with the appropriate management of monetary and fiscal policy, to restore the economy to reasonably full employment and relative price stability.

Subsequently, the President in a news conference on August 4, 1971 stated that he still opposed the idea of an activist wage-price policy, but he indicated that "we have an open mind" on the subject. However, the President had to deal with a severe balance-of-payments of crisis which had begun to develop in early summer, and with heightened speculative attacks on the dollar in world markets. So, 11 days later, after consultation with his Economic Advisers (including Arthur Burns), he ordered a bold shift in the nation's economic policy. In a special address to the nation on August 15, 1971, the President announced the adoption of a New Economic Policy which called for:

1. An immediate 90-day freeze on prices, wages, salaries and rents to be monitored by the Office of Emergency Preparedness, and to be subject to the policy direction of a newly established Cost of Living Council.
2. The temporary suspension of full convertibility of U.S. dollars into gold for foreign treasuries and central banks, pending needed reforms in international monetary arrangements.
3. The imposition of a temporary 10 percent surcharge on imports into the U.S., as a means of reducing domestic demand for imports and stimulating increased world demand for U.S. exports.

In addition to these measures which were instituted under existing statutory authority, the President recommended that Congress:

1. Establish a Job Development Credit—an accelerated investment tax credit at the rate of 10 percent for one year effective August 15, 1971, to be followed by a permanent credit of 5 percent for subsequent years.
2. Repeal the existing 7 percent excise tax on automobiles, effective August 15, 1971.
3. Advance to January 1, 1972 the increase of personal income tax exemptions scheduled to take effect January 1, 1973.

The program package also provided for a planned reduction in Federal expenditures in fiscal 1972 by $4.7 billion, to be derived mainly from a 5 percent cut in Federal employment, a six months freeze on the Federal pay increase scheduled for January 1, 1972, and delays in the institution of general revenue sharing and welfare reform.

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[79] U.S. *Congress. Joint Economic Committee.* The 1971 Midyear Review of the Economy. Hearings . . . July 7, 8, 20, 21, 22, and 23, 1971. 92nd Congress, 1st Session, p. 253.

In subsequent statements, Administration policy makers explained that the President had opposed earlier action on a number of economic problems facing the nation because he did not want to deal with these problems in a piecemeal fashion. Instead, he chose to wait until it was economically and politically feasible to adopt a policy approach which enabled the Government to attack its domestic and international problems in a comprehensive and integrated manner. Such an approach, in his view, would provide the most effective means of assuring a gradual return to relative price stability and reasonably full employment, and of instilling renewed confidence in the American dollar in world markets.

Thus, in retrospect, there were several reasons why the "game plan" had to be scrapped. Instead of maintaining relatively full employment, joblessness rose from 3.6 percent in January 1969 to a peak of 6 percent during the first half of 1971. The Administration had initially asserted that monetary and fiscal policies by themselves could restore relative price stability to the economy. However, during 1969 and 1970, price increases accelerated and then only moderated slightly during the first half of 1971. The game plan produced too much slack in the economy, and businesses gradually lost confidence in the economy's ability to cope with rising unemployment and continued inflation. Consumers, on the other hand, demonstrated a growing lack of confidence in the economy evidenced by widespread inflationary expectations and concern over rising unemployment. With a bad psychological climate at home and a sharp decline in world confidence in the soundness of the dollar, the Administration by August 1971 realized that a new plan of attack was needed.

Economic Controls, August 1971–August 1972

As noted above, the Nixon Administration had been under intense pressure during the first half of 1971 to adopt a noncompulsory wage and price program to combat inflation. However, by early August 1971 the Administration came to the conclusion that economic circumstances called for more stringent action against inflation. Hence, the decision was made to impose a 90-day freeze on wages, prices and rents effective August 15, 1971 to (1) bring a temporary halt to practically all wage and price increases, (2) place an effective damper on inflationary expectations, and (3) provide the Government time to prepare and set in motion a more flexible and selective system of mandatory controls.

To assure maximum impact the Administration felt that the freeze should be comprehensive in scope and that exemptions from coverage should be kept to a minimum. During the freeze period nearly 6,000 requests for exemptions and exceptions to freeze regulations were considered by the newly created Cost of Living Council (CLC), which was given the responsiblitiy of establishing the overall policies of the stabilization program. Aside from the limited number of exemptions allowed under the original freeze order, only 5 individual exemptions were granted by the Council during the freeze period. In choosing to administer the freeze strictly, policy makers conceded that there would be numerous inequities, and hardships, but regarded

these difficulties as endurable by most economic interests for the brief 90-day period during which the freeze would be in force.[80]

On the whole, the freeze showed a significant impact on wage and price patterns from August through November. Consumer prices rose by a seasonally adjusted annual rate of 1.9 percent, compared to a greater than 4 percent rate in the 3 months preceding the freeze. The modest gain in consumer prices was due largely to price changes of items not subject to controls—in particular raw agricultural products. Meanwhile, wholesale prices actually declined at an annual rate of 0.8 percent in contrast to a 5.3 percent annual rate of increase recorded during the three month period preceding controls. Likewise, wages and salaries increased slightly, with average hourly earnings rising by a seasonally adjusted annual rate of about 1.8 percent between August and November, compared to a 7 percent increase during the previous three-month interval.

Several weeks before the end of the freeze, President Nixon unveiled on October 7, 1971 the basic framework of the Phase II stabilization program (hereafter referred to as the postfreeze program) which would go into effect immediately after the freeze ended on November 13. This new program was designed to provide a "flexible and selective" system of economic restraints on wages, prices and rents so as to prevent a resumption of excessive rises in the cost of living. As an *interim* goal, the Cost of Living Council announced that the postfreeze stabilization program would be designed to reduce the rate of inflation to a range of 2 to 3 percent by the end of 1972.

Administratively, the CLC was assigned the responsibility of coordinating the anti-inflation efforts of the postfreeze program—including the setting of basic goals, the determination of program coverage, and the functions of oversight and enforcement. Two official bodies were created to develop standards and make decisions on changes in all prices (including rents) and compensation (wages, salaries, and fringe benefits); these bodies were, respectively, the Price Commission, composed of seven public members, and the tripartite Pay Board consisting of 15 members, divided equally among business, labor and public representatives.[81] In addition, several advisory committees were created to promote voluntary restraints on interest and dividends; to elicit state and local government cooperation; to suggest means to curtail price increases in the health services industries; and to promote productivity growth throughout the economy. The operation of the pre-existing tripartite Construction Industry Stabilization Committee, for the regulation of wages in the construction industry, was placed under the authority and supervision of the Pay Board.

In the hope of avoiding the development of serious administrative bottlenecks in the postfreeze program, the CLC decided at the outset that the stabilization effort should concentrate mainly on the largest economic units in the economy, which it believed would more or less

[80] For a more detailed description of the freeze program see: the first Quarterly Report of the Cost of Living Council, covering the period August 15 through December 31, 1971.

[81] It should be noted that four of the five labor members resigned from the Board on March 22, 1972, charging that the stabilization program offered "no fairness, no equity [and] no justice." On March 23, President Nixon issued an Order providing for the reorganization of the Pay Board. Membership on the Board was reduced to 7 public members, consisting of 1 labor and 1 business member, and the five existing public members. It was stressed, however, that all of the old Board's rules and regulations would "remain in full force."

set the general pattern for wages and prices. Accordingly, it constructed a three-tier classification system for firms and employee groups subject to economic stabilization regulations. The largest economic units were required to receive advance approval from the Price Commission and Pay Board before price and pay increases could be implemented. Intermediate size firms and employee units could increase wages and prices in accordance with program stabilization guidelines and regulations; however, reports had to be made to the Price Commissions or Pay Board following such action. On the other hand, small economic units were not required to give notice of wage and price increases, but such increases—subject to monitoring and spot checks—could be made only if they were consistent with program guidelines and regulations. The specific classification criteria for the three-tier system cited above are shown below.

REQUIRED REPORTING OF PRICE AND WAGE INCREASES

Tier	Action required	Price increases (size of firm)	Wage increases (number of workers)
I	(a) Prenotification of Price Commission or Pay Board (increase to be effective with approval of Commission or Board). (b) Tier I firms to submit quarterly price, cost, and profits report to Price Commission.	Sales of $100 million and over (1,500 firms with 45 percent of all sales).	Affecting 5,000 or more workers (10 percent of all employees).
II	(a) Report to Price Commission or Pay Board. (b) Tier II firms to submit quarterly price, cost, and profits report to Price Commission.	Sales of $50 million to $100 million (1,000 firms with 5 percent of all sales).	Affecting 1,000 to 5,000 workers (7 percent of all employees).
III	No reports (but increases to be made only in accordance with Price Commission and Pay Board regulations and to be subject to monitoring and spot checks).	Sales of less than $50 million (10 million enterprises with 50 percent of all sales).	Affecting less than 1,000 workers (83 percent of all employees).

Source: Cost of Living Council.

Finally, the Cost of Living Council exempted certain sectors of the economy which, in its view, did not merit direct control. To extend the scope of control would serve only to complicate the administrative machinery of the postfreeze program. For this reason, the following were exempted from control: prices that are not wholly U.S. transactions such as export prices, import prices, and international shipping rates; prices that are self-assessed such as dues of nonprofit organizations; prices without a clear basis of valuation, such as prices of art and handicraft objects; prices of raw agricultural products sold in markets in which there is a large number of both buyers and sellers, and in which prices are subject to frequent fluctuations; and certain transactions which cannot be clearly characterized as prices, wages, salaries, or rents—e.g., taxes, workmen's compensation, welfare payments, child support payments, and alimony.

It should be noted, too, that the Cost of Living Council in December 1971 ruled that the issuance of mandatory regulations and orders providing for the stabilization of interest rates and finance charges would not be necessary, given the fact that short and long term rates were steadily declining. Nevertheless, it was expected that lenders

would comply with the spirit and intent of the program, since they were aware that controls could be readily applied.[82]

In subsequent decisions designed to further streamline the operation of the postfreeze program, the Cost of Living Council exempted a major segment of the small business community from economic controls. The most sweeping exemption covered business firms of 60 or fewer employees. This was applied to all industries except health care and construction, and to all small firms except those in which more than 50 percent of the employees are affected by a master contract covering more than 60 workers. As a result, more than 5 million firms and 19 million employees were freed from the control system, leaving 1.5 million firms with $1,300 billion (72 percent of the total) annual sales and 53 million employees (74 percent of the total) under the control program. An exemption was also given to 378,000 employees of 67,500 small local government units.[83] Controls, however, were reimposed in July on all firms in the lumber industry with sales of $100,000 or more, because of a rapid run-up of lumber and plywood prices. The economic justification for the small business exemption was the premise that prices charged by smaller firms were markedly influenced by behavior of larger firms remaining under controls.

The price and wage guidelines designed to meet the objectives of the postfreeze stabilization program were set respectively by the Price Commission and the Pay Board.

The policies and regulations adopted by the Price Commission were designed to hold average price increases across the economy to a rate of no more than 2½ percent per year. Such a guideline was regarded as consistent with the Cost of Living Council's objective of reducing the rate of inflation to not more than 2–3 percent by the end of 1972. As a general rule, price increases in excess of the base price were not to be allowed unless it could be demonstrated that such increases could be justified solely on the basis of allowable cost increases in effect on or after November 14, 1971; these cost increases were to be reduced to reflect gains in productivity or output per hour of work. Also, price increases justified by cost increases, were required not to yield a pretax profit margin (as a percent of total sales) on a particular product or service, higher than that recorded in the base period. Base-period profits were the weighted average of a firm's profits earned during the best two of the firm's last 3 fiscal years ending prior to August 15, 1971.

Taking into account the long-term productivity trend of a 3 percent annual increase, and the Price Commission guideline of a 2½ percent average price increase, the Pay Board adopted a 5.5 percent standard for wage and salary increases. In most instances the 5.5 percent standard was to be used to compute the maximum permissible annual aggregate wage and salary increases.[84] The Board noted, however, that the "appropriateness of the standard" would be reviewed periodically to insure that it would be generally fair and equitable, that it would

[82] For additional information on program administration and coverage see: the first two Quarterly Reports of the Cost of Living Council, covering the periods August 15 through December 31, 1971, and January 1 through March 31, 1972.

[83] For additional information see: the third Quarterly Report of the Cost of Living Council, covering the period April 1 through June 30, 1972.

[84] Because the Economic Stabilization Act, as amended in December 1971, mandated special treatment for certain types of deferred income fringes, additional "qualified" benefit standards were set by the Pay Board in February 1972. Consequently, average firm increases in the total wage-benefit package could be up to 6.6 percent of the base compensation, and in some cases even higher.

call for generally comparable sacrifice by business and labor as well as other segments of the economy, and that it would take into account changes in productivity and the cost of living, as well as other factors consistent with the purposes of the stabilization program.

Rents were subject to Price Commission rules and regulations which were designed to hold average rent increases across the nation to an increase of no more than 2½ percent per year. In general, the rule provided that no person could increase a rent unless he had complied with Price Commission rent stabilization regulations, regardless of whether the increase was otherwise allowable under these regulations. This rule applied to any transaction after December 28, 1971, involving a lease or implied contract of occupancy of a residence or other real property.[85]

The Pay Board's analysis of the wage control program from November 14, 1971 through August 15, 1972 concluded that the actual behavior of wages had been consistent with the general pay standard of 5.5 percent. In fact, the weighted average increases in wages and salaries approved by the Board during this period of the postfreeze program had amounted to 5.0 percent—involving nearly 13 million employees.[86] As for data compiled by the Bureau of Labor Statistics, both the index of average hourly earnings in the private nonfarm sector (adjusted for overtime in manufacturing only) and the index of compensation per man-hour in the private nonfarm sector increased by annual rates of about 6 percent from November 1971 through August 1972.[87] Thus, wage and salary gains were apparently not too far out of line with the Pay Board's objectives during the first nine months of the postfreeze program.

In the same period, prices at the consumer level showed improvement. During the early stages of the program, retail prices rose at an annual rate of 4.8 percent (seasonally adjusted) from November 1971 to February 1972, largely because some postponed wage and price adjustments were allowed to go into effect after the freeze. Thereafter the rate of increase in consumer prices fell to slightly less than 3.0 percent (annual rate) from February through August 1972—the first anniversary of the Administration's stabilization program. During the first year of the economic control program consumer prices increased by 3 percent, a decided improvement over the 4.4 percent increase during the previous 12 month period (August 1970–August 1971).

The record of wholesale prices, on the other hand, was not so impressive. During the period corresponding to the postfreeze bulge in consumer prices—November 1971–February 1972—wholesale prices rose at a 6.9 percent annual rate (seasonally adjusted), with farm products increasing by 21.6 percent and consumer foods by 14.5 percent. Thereafter through August 1972 prices rose by 5.4 percent (seasonally adjusted annual rate), with farm products increasing by 8.4 percent and consumer foods by 4.9 percent. Changes in the prices of raw agricultural products which were exempted from the control program, directly affected food prices. On the other hand, the indus-

[85] For more information on Price Commission and Pay Board guidelines and regulations concerning prices (including rents) and wages see: the second Quarterly Report of the Cost of Living Council, covering the period January 1 through March 31, 1972.

[86] Pay Board Release No. 120, August 14, 1972. Data for the remainder of 1972 were not available at the time this paper was written.

[87] Data for compensation per man-hour were for third quarter 1971 to third quarter 1972.

trial commodities component of the wholesale price index, most of it subject to control, rose at a 4.2 percent annual rate during February–August 1972, which was considerably more than the 2.7 percent rise in the commodities, less food, component of the consumer price index during this period.

Because of the sharp gains in food prices and the possible effect of future rapid expansion of the economy on the general level of prices, most observers were unwilling to declare that the economy had finally turned the corner of inflation. In general it was felt that more time would be needed to see whether or not controls had been effective. In this connection there also arises the question: To what extent have controls been the principal cause of reduced inflation during this period? There are grounds for arguing that reduced inflation could be attributed in part, at least, to continuing slack in the economy and the cyclical rise in productivity during this period.

Finally, the Nixon Administration declared in January 1972 that the programs being pursued under the New Economic Policy, in addition to temporary wage and price controls, would enable the nation to reduce unemployment from 6 percent in January to 5 percent by the end of 1972. These efforts would include: An expansive budget and monetary policy to increase private demand and reduce the excessive slack in the economy; a major realignment of exchange rates to improve the U.S. competitive position in world markets; expanded manpower and unemployment insurance programs to help reduce structural unemployment and cushion the burden of unemployment for those out of work; and the further liberalization of business investment incentives to encourage greater productivity in the economy. In the Administration's view, expansionary economic policy, supplemented by selective economic controls, could achieve this reduction in unemployment during 1972 without causing a renewal of serious inflation or inflationary expectations.

The expected growth in output for the year was put at 9½ percent in money terms, or 6 percent in real terms. During the first three quarters of 1972, real output exceeded expectations—increasing by a seasonally adjusted annual rate of 7 percent. Despite this impressive rate of expansion, unemployment remained close to 6 percent from January through May and then dipped slightly to 5.5 percent in June, remaining at about that level through August.

In sum, as of August 1972, economic controls had been a factor in the marked reduction in the rate of inflation, but no victory could be claimed in the battle against inflation, particularly in light of the continued rise of food prices at the retail and wholesale levels. Moreover, the inflation outlook was still clouded by a number of uncertainties: Could controls reduce the rate of inflation below 3 percent? Could the current rapid rate of expansion of the economy cause a resumption of faster price increases, with or without controls? Could conventional monetary and fiscal policies alone maintain relatively stable prices, as selective controls were phased out? Finally, was the continuation of controls having an adverse effect on employment, and making it more difficult to reduce the unemployment rate?

The New Economic Policy during its first year was accompanied by a marked expansion in economic activity. Total civilian employment rose by some 2.8 million; however, this rise barely offset the 2.6

million increase in the total civilian labor force during the same period, which explained the lack of major improvement in the unemployment situation. It was, however, uncertain whether the persistence of high unemployment was caused by a lag in the economy's response to expansionary economic policies, or by the structure of employment making it insensitive to the cyclical upswing in economic activity.

As of August 1972, it was apparent that the New Economic Policy, introduced at a time of sluggish activity and faltering recovery, created a shock that may have assisted in moderating the inflation and in spurring the rate of the economy's growth. On the other hand, it was still far short of its main objective of restoring the economy to reasonably full employment, without inflation.

Concluding Observations

Since passage of the Employment Act of 1946, Government economic policy has had to cope with inflationary trends of differing severity in four periods: 1945–1948; 1950–1951; 1955–1958; and 1965–1972. As this survey points out, with the notable exception of the Korean period—1950–1952, economic policy on the whole did not fare well in coping with inflation during these periods. The inflation which occurred immediately after World War II was due not only to the effects of pent-up demand pressures and postwar readjustment. It was also reinforced by what proved to be the inappropriate combination of economic policies in the form of precipitous lifting of economic controls by Congress—despite President Truman's opposition, the institutional barriers that prevented monetary policy from playing a restrictive role, and the unneeded stimulus of expansionary fiscal policy.

In contrast, Government policy during the 1950–1951 period responded quickly and effectively to the sudden emergence of serious inflation following the breakout of hostilities in Korea in June 1950. Both monetary and fiscal policy assumed an actively restrictive role, and economic controls were applied when it became apparent that wages and prices could not be restrained through voluntary action by labor and management interests. The fact that the threat of serious inflation (or near runaway inflation) was ended within one year after the flare-up of hostilities was a tribute to the responsiveness of makers of economic policy during this period.

Economic policy during the third period of postwar inflation, 1955–1958, was highly dampening in its impact on economic growth. But mild or "creeping inflation" persisted because of a number of market and structural influences which were largely unresponsive to restrictive monetary and fiscal action. History has also shown that economic policy in this instance was overly restrictive in its impact on the economy, causing the development of excessive slack in the economy and sharply rising unemployment during the last 12 months of this period.

From 1965 through 1968 economic policy not only failed to contain inflation, but indeed was the principal cause of inflation. In retrospect, policy—especially fiscal policy—should have shifted to active restraint by early 1966 to compensate for the growing cost of the nation's involvement in the Vietnam conflict. However, this was not done until

late 1968. Following this belated shift to economic restraint, economic policy maintained its pressure on overall spending through 1970. The consequence was a mild recession, with unemployment rising sharply during 1970 and remaining unacceptably high—around 6 percent—throughout 1971 and the first few months of 1972. The rate of inflation, furthermore, continued to accelerate in 1969 and 1970. If was not until after the Government felt compelled to apply economic controls in August 1971 that prices began to show signs of improvement. In this instance, the adoption of controls at this stage in the battle against inflation was an admission that conventional monetary and fiscal policies had failed in their efforts to restore the economy to relative price stability and reasonably full employment.

Though this survey has concerned itself mainly with the role of Government economic policy during periods of inflation, it must be recognized that anti-inflation policy has never been conceivable in isolation, but always a part of economic policy concerned with all of the problems of the economy, in particular that of unemployment. Like inflation, unemployment has been a matter of major concern to policy makers during the postwar period. As this survey has noted, the Employment Act of 1946 made no specific reference to "full employment" and "price stability"; it spoke instead of a reasonable interpretation of *maximum* employment and purchasing power. Nevertheless, the policy pronouncements of the Truman, Eisenhower, Kennedy, Johnson, and Nixon Administrations lead to the view that each administration was committed to the idea that the Government should conduct its economic affairs in a manner which would promote both reasonably full employment and relatively stable prices. History has shown, however, that the achievement of these fundamental objectives has not been the rule, but the exception. Since 1946, economic policy has succeeded in maintaining both relative price stability and reasonably full employment in only 1952, 1953, 1955, and 1965. In all other years, one of three conditions has prevailed. Low level unemployment has been associated with undesirably large increases in the general price level. Secondly, by contrast, high level unemployment has occurred mostly in periods when prices have been relatively stable. Thirdly, the years 1958, 1970, 1971 and 1972 were exceptional in that the economy experienced both rapid price increases and high or rising unemployment.

Hence, it is clear that economic policy has yet to maintain an acceptable trade-off between full employment and inflation on a continuing basis. In particular, the record or policy since the mid-1960's clearly shows that the trade-off presents a tough dilemma for future policy. In this connection, it is known that high unemployment, the symptom of an economy operating below its potential, results in the irretrieveable losses of income and output. Thus if the success in the battle against inflation causes and maintains an unacceptable level of unemployment, then economic policy has failed in meeting its objectives.

On the other hand, it is clear that inflation distorts the distribution of wealth and income and disturbs the allocative processes of the market place. In its extreme form, typified by the "galloping inflation" causing the German Collapse of 1923, inflation is a self-reinforcing condition that produces the total breakdown of the economic system.

But the record of the United States gives no support to the view that the general and persistent price increases characteristic of the U.S. experience during four periods of inflation since 1946 are necessarily irreversible or catastrophic.

In the United States and in may other advanced industrial countries, the problem of inflation appears to be a condition that is difficult to eliminate, given the existing priorities of economic policy. This necessarily mild inflation could become a chronic condition of the system. It would not result in the breakdown in the system but it would produce distortions of resource allocation and might add an element of uncertainty in expectations.

The main questions confronting future economic policy, then, are to determine to what extent susceptibility to inflation is due to structural defects in the economic system, on the one hand, and to deficiencies in the formulation and conduct of policy on the other. The resulting analysis will determine which combination of policy alternatives and remedies will be most likely to be appropriate in meeting the varied economic challenges offered by inflation.

All policies—anti-inflation policies among them—are apt to produce side-effects, some of them unanticiapted, some good, and some bad. So there is usually some need to balance the prospective benefit of better management of inflation against the risk of damaging other important social and economic goals.

Finally, it has been seen that during the four postwar episodes described in this study, the Federal Government has engaged in a broad spectrum of policies in its efforts to combat inflation. This has included the rigid adherence to conventional monetary and fiscal measures, "jawboning" to obtain voluntary wage and price restraint by management and labor interests, the adoption of wage-price guidelines, and the application of mandatory controls on wages and prices, including a temporary freeze. The success or failure of these policies has been indicated in this survey, although definitive judgments are difficult to make with confidence. Often a policy, which was considered to be sound in the initial stages of application, turned out to be inappropriate, due to unanticipated political, military or economic developments which intervened in the process. The application of controls on wages and prices in August 1971, for example, marked a complete reversal of Administration policy which had operated under the assumption that conventional monetary and fiscal actions could be successful both in moderating inflation and in avoiding a serious rise in unemployment.

Conceding the many uncertainties that inevitably confront the makers of economic policy, it now appears that there are two major points of view to consider in charting the most appropriate course for future policy. First, there are those who feel that, for the foreseeable future, monetary and fiscal policies will have to be supplemented with an appropriate wage and price policy—or incomes policy—to assure a more acceptable trade-off between inflation and full employment. Such a policy could involve a range of actions, including several of those already mentioned: "jawboning," concerted Governmental attacks on structural barriers to price stability, the adoption of voluntary wage-price guidelines, and of course the application of mandatory controls.

On the other hand, there are others who would rely exclusively on fiscal and monetary policies as the best means of controlling inflation and maintaining high level employment. The postwar record of economic policy cannot give unqualified support to either school. It may be concluded with some assurance, however, that a broad center does exist between the extremes of non-interventionist or laissez faire policies that have tended to lead to rising unemployment and of long-standing use of comprehensive economic controls that eventually distort normal market processes. Within this range there is ample room for continuing exploration of alternative policies to find those that will prove most effective.

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APPENDIX

SELECTED STATISTICS

TABLE 1.—PATTERNS OF PRICES AND UNEMPLOYMENT, 1945–72

Period	1967=100			Unemployment as a percent of total civilian labor force
	Consumer price index [1]	Wholesale price index [2]	GNP deflator [3]	
PERIODS OF RISING PRICES				
Pent up demand and the end of wartime controls:				
1945 [4]	53.9	54.6	50.7	1.9
1946	58.5	62.3	56.7	3.9
1947	66.9	76.5	63.5	3.9
1948	72.1	82.8	67.7	3.8
Percent increase, 1945–48	**33.8**	**51.6**	**33.5**	
Average annual percent increase	**10.2**	**15.0**	**10.1**	
Korean buying spree:				
1950 [5]	72.1	81.8	68.2	5.3
1951	77.8	91.1	72.8	3.3
1952	79.5	88.6	74.4	3.1
Percent increase, 1950–52	**10.3**	**8.3**	**9.1**	
Average annual percent increase	**5.0**	**4.1**	**4.5**	
Creeping inflation during mild expansion and then economic recession:				
1955 [4]	80.2	87.8	77.3	4.4
1956	81.4	90.7	79.9	4.1
1957	84.3	93.3	82.9	4.3
1958	86.6	94.6	85.0	6.8
Percent increase, 1955–58	**8.0**	**7.7**	**10.0**	
Average annual percent increase	**2.6**	**2.5**	**3.2**	
Excess demand and cost push, economic recession and recovery:				
1964 [4]	92.2	94.7	92.6	5.2
1965	94.5	96.6	94.3	4.5
1966	97.2	99.8	96.9	3.8
1967	100.0	100.0	100.0	3.8
1968	104.2	102.5	104.0	3.6
1969	109.8	106.5	109.0	3.5
1970	116.3	110.4	115.0	4.9
1971	121.3	113.9	120.4	5.9
1972	[6] 124.5	[6] 118.1	[7] 123.6	[6] 6.1
Percent increase, 1964–72	**34.0**	**24.7**	**33.5**	
Average annual percent increase, 1964–72	**3.7**	**2.8**	**3.7**	
Average annual percent increase, 1964–70	**3.8**	**2.6**	**3.7**	
Average annual percent increase, 1970–72 [8]	**3.5**	**3.4**	**3.7**	
PERIODS OF RELATIVE PRICE STABILITY				
1948	72.1	82.8	67.7	3.8
1949	71.4	78.7	67.3	5.9
1950	72.1	81.8	68.2	5.3
Percent increase, 1948–50	**0**	**−.2**	**.7**	
Average annual percent increase	**0**		**.3**	
1952	79.5	88.6	74.4	3.1
1953	80.1	87.4	75.1	2.9
1954	80.5	87.6	76.2	5.5
1955	80.2	87.8	77.3	4.4
Percent increase, 1952–55	**.9**	**−.9**	**3.9**	
Average annual percent increase	**.3**	**0**	**1.3**	
1958	86.6	94.6	85.0	6.8
1959	87.3	94.8	86.5	5.5
1960	88.7	94.9	87.8	5.5
1961	89.6	94.5	89.0	6.7
1962	90.6	94.8	90.0	5.5
1963	91.7	94.5	91.1	5.7
1964	92.9	94.7	92.6	5.2
Percent increase, 1958–64	**7.3**	**.1**	**9.0**	
Average annual percent increase	**1.2**	**0**	**1.4**	

See footnotes, p. 425.

FOOTNOTES

[1] A monthly measure, compiled by the U.S. Bureau of Labor Statistics, of changes in the prices of goods and services consumed by urban families and individuals. The index includes a group of about 300 goods and services, ranging from food to automobiles and from rents to haircuts, normally purchased by urban wage earners and clerical workers representing both families and single persons. It does not include items that are bought primarily by suburban and rural families or by lower- and upper-income families. The consumer price index is sometimes incorrectly called the cost-of-living index. It fails to measure the cost of living mainly because quality changes are not measured precisely and there are delays in including new goods and services.

[2] A monthly measure, compiled by the U.S. Bureau of Labor Statistics, of changes in wholesale prices or of a representative group of 2,200 commodities which are sold in primary markets throughout the United States. Like the consumer price index, this index does not take full account of quality changes in certain commodities.

[3] A quarterly measure, compiled by the U.S. Department of Commerce, of price patterns derived from the comprehensive gross national products accounts. The index is obtained by dividing GNP in current dollars by GNP in constant dollars.

[4] Last full year of relative price stability.

[5] Prices began to rise sharply in June 1950.

[6] Average for January–August 1972.

[7] Average for 1st 3 quarters of 1972.

[8] Economic controls were applied in August 1971.

Note: For a discussion of the relative merits of the CPI, WPI, and IPI as measures of price behavior, see the paper by Roger H. Bezdek, "Conceptual and Empirical Problems in the Measurement of Prices and Productivity," pp. 242–262, above.

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

TABLE 2.—SELECTED ECONOMIC INDICATORS, 1945–72

Year	Indicators of price movements (percent change from previous year)			Rate of unemployment (percent)	Capacity utilization rate in manufacturing [2] (percent)	Ratio: Actual GNP/potential GNP [3]	Federal budget surplus or deficit (−) (billions of dollars)		Monetary indicators	
	Consumer price index [1]	Wholesale price index [1]	Implicit price deflator [1] for total GNP				Unified budget,[4] fiscal year	National income and accounts budget,[5] calendar year	Money stock [6] (percent change from previous year	Free reserves [6] (millions of dollars)
1945	2.3	1.7	2.6	1.9			−45.0			1,157
1946	8.5	14.1	11.8	3.9			−18.0			743
1947	14.3	22.8	11.9	3.9			6.6			762
1948	7.8	8.2	6.6	3.8	92.7		8.9	8.4	−1.4	663
1949	−1.0	−5.0	−.6	5.9	82.7		1.0	−2.4	−.3	685
1950	1.0	3.9	1.3	5.3	91.9		−2.2	9.1	4.5	885
1951	7.9	11.4	6.8	3.3	95.1		7.6	6.2	5.6	169
1952	2.2	−2.7	2.1	3.0	92.8	99.8	.1	−3.8	3.8	−870
1953	.8	−1.4	1.0	2.9	95.5	100.7	−5.3	−7.0	1.1	252
1954	.5	.2	1.5	5.5	84.1	96.0	−1.2	−5.9	2.7	457
1955	−.4	.2	1.4	4.4	90.0	99.8	−3.0	4.0	2.2	−245
1956	1.5	3.3	3.4	4.1	88.2	98.2	4.1	5.7	1.3	−36
1957	3.6	2.9	4.3	4.3	84.5	96.3	3.2	2.1	−.7	−133
1958	2.7	1.4	2.5	6.8	75.1	92.0	−2.9	−10.2	3.8	−41
1959	.8	.2	1.7	5.5	81.4	94.5	−12.9	−1.2	1.1	−424
1960	1.6	.1	1.6	5.5	80.1	93.6	.3	3.5	−.6	669
1961	1.0	−.4	1.3	6.7	77.6	92.2	−3.4	−3.8	3.0	419
1962	1.1	.3	1.1	5.5	81.4	94.9	−7.1	−3.8	1.4	268
1963	1.2	−.3	1.3	5.7	83.0	95.2	−4.8	.7	3.7	209
1964	1.3	.2	1.6	5.2	85.5	96.8	−5.9	−3.0	4.5	168
1965	1.7	2.0	1.8	4.5	89.0	99.2	−1.6	1.2	4.7	−2
1966	2.9	3.3	2.8	3.8	91.9	101.7	−3.8	−.2	2.2	−165
1967	2.9	.2	3.2	3.8	87.9	100.3	−8.7	−12.4	6.6	107
1968	4.2	2.5	4.0	3.6	87.7	101.0	−25.2	−6.5	7.8	−310
1969	5.4	3.9	4.8	3.5	86.5	99.6	3.2	8.1	3.2	−829
1970	5.9	3.7	5.5	4.9	78.3	94.9	−2.8	−12.9	5.4	−49
1971	4.3	3.2	4.6	5.9	75.0	93.5	−23.0	−21.7	6.2	58
1972	[7] 2.6	[7] 3.7	[7] 2.7	[7] 6.1	[8] 76.3	[8] 95.2	[9] −23.0	[10] −18.3		

[1] See table 1.
[2] See table 12.
[3] See table 13.
[4] See table 4.
[5] See table 5.
[6] Total demand deposits plus currency outside banks; see table 6 for a description of free reserves.
[7] Average for January to August 1972.
[8] Average annual rate for 1st 3 quarters of 1972.
[9] Preliminary.
[10] Average annual rate for 1st 2 quarters of 1972.

Sources: U.S. Department of Labor, Bureau of Labor Statistics; U.S. Department of Commerce, Bureau of Economic Analysis; Federal Reserve System.

TABLE 3.—YEAR-TO-YEAR CHANGES IN PRODUCTIVITY, HOURLY COMPENSATION AND UNIT COSTS IN THE PRIVATE NONFARM ECONOMY, 1948–72[1]

[Percent change from revious year]

Year	Productivity output per man-hour	Compensation per man-hour	Unit labor costs	Unit non-labor costs	Real compensation per man-hour
1948	3.0	9.0	5.8	−3.1	1.2
1949	4.0	2.9	−1.0	16.6	3.9
1950	6.3	5.5	−.8	1.5	4.5
1951	2.0	8.7	6.6	7.6	.7
1952	.9	5.5	4.5	4.6	3.2
1953	2.9	5.6	2.6	5.3	4.8
1954	2.3	3.2	.9	6.3	2.8
1955	4.4	3.5	−.9	.6	3.8
1956	−.6	5.8	6.4	2.0	4.2
1957	2.2	5.7	3.4	9.0	2.2
1958	2.5	3.8	1.3	9.0	1.0
1959	3.4	4.3	.9	−3.3	3.5
1960	1.2	4.1	2.8	5.6	2.5
1961	3.0	3.2	.2	4.8	2.1
1962	4.6	4.0	−.5	4.0	2.8
1963	3.1	3.6	.5	2.4	2.4
1964	3.7	4.7	1.0	.6	3.4
1965	2.9	3.7	.8	.1	2.0
1966	3.5	6.1	2.5	2.2	3.1
1967	1.6	5.7	4.0	6.2	2.8
1968	2.9	7.3	4.3	3.5	2.9
1969	−.1	6.9	7.1	5.5	1.6
1970	.7	7.0	6.3	10.3	1.1
1971	3.6	6.9	3.4	6.1	2.7
1972[2]	4.0	5.5	1.4	(3)	2.7

[1] These percentage changes are based on data contained in table 11.
[2] Average for the 1st 3 quarters of 1972.
[3] Not available.

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

TABLE 4.—FEDERAL EXPENDITURE PATTERNS, FISCAL YEARS 1950–73

[All amounts in billions of dollars]

Fiscal year	Receipts		Outlays		Surplus or deficit (—)	Defense outlays		Nondefense outlays	
	Total	Increase over previous year	Total	Increase over previous year		Total	Increase over previous year	Total	Increase over previous year
Consolidated cash statement: [1]									
1950	40.9	—0.7	43.1	2.5	—2.2	13.1	0	30.0	2.5
1951	53.4	12.5	45.8	2.7	7.6	22.5	9.4	23.3	—6.7
1952	68.0	14.6	68.0	22.2	.1	44.0	21.5	23.9	.6
1953	71.5	3.5	76.8	8.8	—5.3	50.4	6.4	26.4	2.5
Unified budget: [2]									
1954	69.7	—1.8	70.9	—5.9	—1.2	47.0	—3.4	23.9	—2.5
1955	65.5	—4.2	68.5	—2.4	—3.0	40.7	—6.3	27.8	3.9
1956	74.5	9.0	70.5	2.0	4.1	40.7	0	29.8	2.0
1957	80.0	5.5	76.7	6.2	3.2	43.4	2.7	33.3	3.5
1958	79.6	—.4	82.6	5.9	—2.9	44.2	.8	38.4	5.1
1959	79.2	—.4	92.1	9.5	—12.9	46.5	2.3	45.6	7.2
1960	92.5	13.3	92.2	.1	.3	45.7	—.8	46.5	.9
1961	94.4	1.9	97.8	5.6	—3.4	47.5	1.8	50.3	3.8
1962	99.7	5.3	106.8	9.0	—7.1	51.1	3.6	55.7	5.4
1963	106.6	6.9	111.3	4.5	—4.8	52.3	1.2	59.0	3.3
1964	112.7	6.1	118.6	7.3	—5.9	53.6	1.3	65.0	6.0
1965	116.8	4.1	118.4	—.2	—1.6	49.6	—4.0	68.8	3.8
1966	130.9	14.1	134.7	16.3	—3.8	56.8	7.2	77.9	9.1
1967	149.6	18.7	158.3	23.6	—8.7	70.1	13.3	88.2	10.3
1968	153.7	4.1	178.8	20.5	—25.2	80.5	10.4	98.3	10.1
1969	187.8	34.1	184.5	5.7	3.2	81.2	.7	103.3	5.0
1970	193.7	5.9	196.6	12.1	—2.8	80.3	—.9	116.3	13.0
1971	188.4	—5.3	211.4	14.8	—23.0	77.7	—2.6	133.7	17.4
1972 [3]	208.6	20.2	231.6	20.2	—23.0	78.2	.5	153.4	19.7

[1] The consolidated cash statement shows the total cash flow of financial transactions (excluding borrowing) between he Federal Government and the public. In addition to administrative budget receipts and expenditures, the cash budget covers the financial transactions of Federal Government trust funds. All social security taxes, excise taxes that support the highway trust fund, employment taxes, deposits by States for unemployment insurance, veterans' life insurance premiums, and other trust fund receipts are included as receipts from the public. All disbursements from these funds are recorded as payments (or outlays).

[2] The unified budget concept includes both Federal funds and trust funds for revenue and outlays. Federal funds correspond roughly to the old administrative budget concept used by the Federal Government prior to fiscal year 1969. Federal funds are those which the Government administers as owner as distinguished from those administered in a trustee or fiduciary capacity (the trust funds). Historical functions of Government, such as national defense, veterans' benefits, commerce, labor, agriculture, interest on the public debt, and others are paid from Federal funds (tax revenue and borrowed funds). Income taxes (individuals and corporations), most excise taxes, estate and gift taxes, customs duties, and miscellaneous receipts are paid into the Federal funds accounts from which all Federal funds expenditures are paid. All trust funds receipts are paid into the specific trust fund accounts for which the revenue is earmarked. All trust fund payments are made from the specific trust funds accounts. Major Federal trust funds are: old-age and survivors insurance, disability insurance, health insurance, unemployment, Federal employees retirement, railroad employees retirement, and the highway trust fund.

[3] Preliminary.

Source: Office of Management and Budget.

TABLE 5.—FEDERAL EXPENDITURE PATTERNS, NATIONAL INCOME AND ACCOUNTS BASIS,[1] 1948–72

[All amounts in billions of dollars]

Calendar year	Receipts		Expenditures		Surplus or deficit (—)	Defense expenditures		Nondefense expenditures	
	Total	Increase over previous year	Total	Increase over previous year		Total	Increase over previous year	Total	Increase over previous year
1948	43.3		34.9		8.4	10.7		24.2	
1949	38.9	—4.4	41.3	6.4	—2.4	13.3	2.6	28.0	3.8
1950	49.9	11.0	40.8	—.5	9.1	14.1	.8	26.7	—1.3
1951	64.0	14.1	57.8	17.0	6.2	33.6	19.5	24.2	—2.5
1952	67.2	3.2	71.0	13.2	—3.8	45.9	12.3	25.1	.9
1953	70.0	2.8	77.0	6.0	—7.0	48.7	2.8	28.3	3.2
1954	63.8	—6.2	69.7	—7.3	—5.9	41.2	—7.5	28.5	.2
1955	72.1	8.3	68.1	—1.6	4.0	38.6	—2.6	29.5	1.0
1956	77.6	5.5	71.9	3.8	5.7	40.3	1.7	31.6	2.1
1957	81.6	4.0	79.6	7.7	2.1	44.2	3.9	35.4	3.8
1958	78.7	—2.9	88.9	9.3	—10.2	45.9	1.7	43.0	7.6
1959	89.7	11.0	91.0	2.1	—1.2	46.0	.1	45.0	2.0
1960	96.5	6.8	93.0	2.0	3.5	44.9	—1.1	48.1	3.1
1961	98.3	1.8	102.1	9.1	—3.8	47.8	2.9	54.3	6.2
1962	106.4	8.1	110.3	8.2	—3.8	51.6	3.8	58.7	4.4
1963	114.5	8.1	113.9	3.6	.7	50.8	—.8	63.1	4.4
1964	115.0	.5	118.1	4.2	—3.0	50.0	—.8	68.1	5.0
1965	124.7	9.7	123.5	5.4	1.2	50.1	.1	73.4	5.3
1966	142.5	17.8	142.8	19.3	—.2	60.7	10.6	82.1	8.7
1967	151.2	8.7	163.6	20.8	—12.4	72.4	11.7	91.2	9.1
1968	175.0	23.8	181.5	17.9	—6.5	78.3	5.9	103.2	12.0
1969	197.3	22.3	189.2	7.7	8.1	78.4	.1	110.8	7.6
1970	191.6	—5.7	204.5	15.3	—12.9	75.1	—3.3	129.4	18.6
1971	199.1	7.5	220.8	16.3	—21.7	71.4	—3.7	149.4	20.0
1972[2]	223.1	24.0	241.4	20.6	18.3	77.6	6.2	163.8	14.4

[1] The National Income and Accounts Budget (NIA Budget) is compiled by the Department of Commerce as a part of its data on the economic activity of the various sectors of the economy. This budget differs from the unified budget concept in 2 important respects. First, all transactions which represent a mere exchange of assets are excluded. This covers such things as the sale of second-hand property or surplus Government goods and all loan transactions, because national income is defined as a measurement of current production and not of transactions involved solely in exchanging already existing assets. Second, receipts and expenditures of the Federal Government are measured on an accrual basis in the NIA Budget, rather than on a cash flow basis.

[2] Annual average for 1st 2 quarters of 1972.

Source: National Income and Accounts Series, U.S. Department of Commerce, Bureau of Economic Analysis.

TABLE 6.—SELECTED MONETARY INDICATORS, 1947–71

December	Billions of dollars, seasonally adjusted				Average daily figures, millions of dollars			
	Money stock				Member bank reserves			Member bank free reserves (excess reserves less borrowings) [5]
	Total	Currency outside banks	Demand deposits [1]	Time and savings deposits [2]	Total	Required [3]	Excess [4]	
1948	111.5	25.8	85.8	36.0	19,990	19,193	797	663
1949	111.2	25.1	86.0	36.4	16,291	15,488	803	685
1950	116.2	25.0	91.2	36.7	17,391	16,346	1,027	885
1951	122.7	26.1	96.5	38.2	20,310	19,484	826	169
1952	127.4	27.3	100.1	41.1	21,180	20,457	723	−870
1953	128.8	27.7	101.1	44.5	19,920	19,227	693	252
1954	132.3	27.4	104.9	48.3	19,279	18,576	703	457
1955	135.2	27.8	107.4	50.0	19,240	18,646	594	−245
1956	136.9	28.2	108.7	51.9	19,535	18,883	652	−36
1957	135.9	28.3	107.6	57.4	19,420	18,843	577	−133
1958	141.1	28.6	112.6	65.4	18,899	18,383	516	−41
1959	142.6	28.9	113.7	67.4	18,932	18,450	482	−424
1960	141.7	28.9	112.8	72.9	19,283	18,527	756	669
1961	146.0	29.6	116.5	82.7	20,118	19,550	568	419
1962	148.1	30.6	117.6	97.8	20,040	19,468	572	268
1963	153.6	32.5	121.1	112.2	20,746	20,210	536	209
1964	160.5	34.2	126.3	126.6	21,609	21,198	411	168
1965	168.0	36.3	131.7	146.8	22,719	22,267	452	−2
1966	171.7	38.3	133.4	158.1	23,830	23,438	392	−165
1967	183.1	40.4	142.7	183.4	25,260	24,915	345	107
1968	197.4	43.4	154.0	204.2	27,221	26,766	455	−310
1969	203.7	46.0	157.7	194.1	28,031	27,774	257	−829
1970	214.8	49.0	165.8	228.9	29,265	28,993	272	−49
1971	228.2	52.5	175.7	269.9	31,329	31,164	165	58

[1] Demand deposits at all commercial banks, other than those due to domestic banks and the U.S. Government, less cash items in process of collection and Federal Reserve float, plus foreign demand balances at Federal Reserve banks.

[2] Time and savings deposits other than those due to commercial banks and the U.S. Government.

[3] Represents the amount (or percentage) of their deposits that U.S. commercial banks are required to set aside as reserves at their regional Federal Reserve bank or as cash in their vaults. Reserve requirements vary according to the category of the bank. The purpose of required reserves is to give the central bank a method of controlling member bank behavior.

[4] The surplus of cash and deposits owned by commercial member banks of the Federal Reserve System over what they are legally required to hold at Reserve banks or in their own vaults. The excess reserve position of a bank is an indication of its ability to invest in government bonds or to make loans to customers. Therefore, if the Federal Reserve System is trying to stimulate business in a period of economic sluggishness, it buys government bonds from private sellers, thus increasing bank reserves; it takes the opposite course when inflation is a problem.

[5] The margin by which excess reserves exceed borrowings at Federal Reserve banks. They are a better indicator of the banking system's ability to expand loans and investment than excess reserves. Manipulation of the net free-reserve position of member banks is an indication of the monetary policy which the Federal Reserve wishes to pursue. If the policy is one of aggressive ease, the Federal Reserve pumps reserves into the banking system with the intention of stimulating sluggish business activity. On the other hand, to halt a business upswing that is exerting inflationary pressures, it adopts a policy of aggressive tightness, contracting free-reserves (sometimes recording negative totals) by the appropriate methods.

Sources: Board of Governors of the Federal Reserve System; the McGraw-Hill Dictionary of Modern Economics. 1965, pp. 186, 216, and 439.

TABLE 7.—CONSUMER PRICE INDEX, SELECTED CATEGORIES, 1945–72

[1967=100]

Period	All items	Commodities					Services		
		All commodities	Food	Commodities less food			All services	Rent	Services less rent
				All	Durable	Nondurable			
1945	53.9	56.3	50.7	64.1	70.9	58.6	48.2	58.8	45.1
1946	58.5	62.4	58.1	68.1	74.1	62.9	49.1	59.2	46.7
1947	66.9	75.0	70.6	76.8	80.3	72.2	51.1	61.1	49.0
1948	72.1	80.4	76.6	82.7	86.2	77.8	54.3	65.1	51.9
1949	71.4	78.3	73.5	81.5	87.4	76.3	56.9	68.0	54.5
1950	72.1	78.8	74.5	81.4	88.4	76.2	58.7	70.4	56.0
1951	77.8	85.9	82.8	87.5	95.1	82.0	61.8	73.2	59.3
1952	79.5	87.0	84.3	88.3	96.4	82.4	64.5	76.2	62.2
1953	80.1	86.7	83.0	88.5	95.7	83.1	67.3	80.3	64.8
1954	80.5	85.9	82.8	87.5	93.3	83.5	69.5	83.2	66.7
1955	80.2	85.1	81.6	86.9	91.5	83.5	70.9	84.3	68.2
1956	81.4	85.9	82.2	87.8	91.5	85.3	72.7	85.9	70.1
1957	84.3	88.6	84.9	90.5	94.4	87.6	75.6	87.5	73.3
1958	86.6	90.6	88.5	91.5	95.9	88.2	78.5	89.1	76.4
1959	87.3	90.7	87.1	92.7	97.3	89.3	80.8	90.4	79.0
1960	88.7	91.5	88.0	93.1	96.7	90.7	83.5	91.7	81.9
1961	89.6	92.0	89.1	93.4	96.6	91.2	85.2	92.9	83.9
1962	90.6	92.8	89.9	94.1	97.6	91.8	86.8	94.0	85.5
1963	91.7	93.6	91.2	94.8	97.9	92.7	88.5	95.0	87.3
1964	92.9	94.6	92.4	95.6	98.8	93.5	90.2	95.9	89.2
1965	94.5	95.7	94.4	96.2	98.4	94.8	92.2	96.9	91.5
1966	97.2	98.2	99.1	97.5	98.5	97.0	95.8	98.2	95.3
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	104.2	103.7	103.6	103.7	103.1	104.1	105.2	102.4	105.7
1969	109.8	108.4	108.9	108.1	107.0	108.8	112.5	105.7	113.8
1970	116.3	113.5	114.9	112.5	111.8	113.1	121.6	110.1	123.7
1971	121.3	117.4	118.4	116.8	116.5	117.0	128.4	115.2	130.9
1972[1]	124.5	120.2	122.6	118.7	118.2	119.0	132.6	118.5	135.2

[1] Average for January to August 1972.

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

TABLE 8.—WHOLESALE PRICE INDEX, SELECTED CATEGORIES, 1945–72

[1967=100]

Period	All commodities	Farm products	Processed foods and feeds	Industrial commodities				Consumer finished goods excluding foods	
				All industrials [1]	Crude materials [2]	Intermediate materials [3]	Producer finished goods	Durable	Nondurable
1945	54.6	78.5	----------	53.0	----------				
1946	62.3	90.9	----------	58.0	----------				
1947	76.5	109.4	82.9	70.8	79.2	70.0	55.4	74.6	80.7
1948	82.8	117.5	88.7	76.9	92.5	76.1	60.4	79.7	85.8
1949	78.7	101.6	80.6	75.3	84.0	74.2	63.4	81.8	82.3
1950	81.8	106.7	83.4	78.0	93.6	77.7	64.9	82.7	83.6
1951	91.1	124.2	92.7	86.1	102.9	87.0	71.2	88.2	90.0
1952	88.6	117.2	91.6	84.1	93.1	84.3	72.4	88.9	87.8
1953	87.4	106.2	87.4	84.8	92.4	85.3	73.6	89.6	88.6
1954	87.6	104.7	88.9	85.0	88.0	85.7	74.5	90.3	88.9
1955	87.8	98.2	85.0	86.9	96.6	88.3	76.7	91.2	89.4
1956	90.7	96.9	84.9	90.8	102.3	92.6	82.4	94.3	91.1
1957	93.3	99.5	87.4	93.3	100.9	95.0	87.5	97.1	93.2
1958	94.6	103.9	91.8	93.6	96.9	94.8	89.8	98.4	92.6
1959	94.8	97.5	89.4	95.3	102.3	96.4	91.5	99.6	94.0
1960	94.9	97.2	89.5	95.3	98.3	96.8	91.7	99.2	94.7
1961	94.5	96.3	91.0	94.8	97.2	95.5	91.8	98.8	94.7
1962	94.8	98.0	91.9	94.8	95.6	95.3	92.2	98.3	94.8
1963	94.5	96.0	92.5	94.7	94.3	95.0	92.4	97.8	95.1
1964	94.7	94.6	92.3	95.2	97.1	95.6	93.3	98.2	94.8
1965	96.6	98.7	95.5	96.4	100.9	96.9	94.4	97.9	95.9
1966	99.8	105.9	101.2	98.5	104.5	98.9	96.8	98.5	97.8
1967	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1968	102.5	102.5	102.2	102.5	102.0	102.6	103.5	102.2	102.2
1969	106.5	109.1	107.3	106.0	110.6	106.2	106.9	104.0	105.0
1970	110.4	111.0	112.0	110.0	118.8	110.0	111.9	107.1	108.2
1971	113.9	112.9	114.3	114.0	122.7	114.3	116.6	110.9	111.3
1972 [4]	118.1	122.5	119.1	117.3	129.0	118.2	119.2	113.2	113.0

[1] Coverage of the subgroups does not correspond exactly to coverage of this index.
[2] Excludes crude foodstuffs and feedstuffs, plant and animal fibers, oilseeds, and leaf tobacco.
[3] Excludes intermediate materials for food manufacturing and manufactured animal feeds; includes, in part, grain products for further processing.
[4] Average for January–August 1972

Source: Department of Labor, Bureau of Labor Statistics.

TABLE 9.—MONTHLY MOVEMENTS IN THE CONSUMER PRICE INDEX, ALL ITEMS, 1946–72

[1967=100]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average
1946	54.5	54.3	54.7	55.0	55.3	55.9	59.2	60.5	61.2	62.4	63.9	64.4	58.5
1947	64.4	64.3	65.7	65.7	65.5	66.0	66.6	67.3	68.9	68.9	69.3	70.2	66.9
1948	71.0	70.4	70.2	71.2	71.7	72.2	73.1	73.4	73.4	73.1	72.6	72.1	72.1
1949	72.0	71.2	71.4	71.5	71.4	71.5	71.0	71.2	71.5	71.1	71.2	70.8	71.4
1950	70.5	70.3	70.6	70.7	71.0	71.4	72.1	72.7	73.2	73.6	73.9	74.9	72.1
1951	76.1	77.0	77.3	77.4	77.7	77.6	77.7	77.7	78.2	78.6	79.0	79.3	77.8
1952	79.3	78.8	78.8	79.1	79.2	79.4	80.0	80.1	80.0	80.1	80.1	80.0	79.5
1953	79.8	79.4	79.6	79.7	79.9	80.2	80.4	80.6	80.7	80.9	80.6	80.5	80.1
1954	80.7	80.6	80.5	80.3	80.6	80.7	80.7	80.6	80.4	80.2	80.3	80.1	80.5
1955	80.1	80.1	80.1	80.1	80.1	80.1	80.4	80.2	80.5	80.5	80.6	80.4	80.2
1956	80.3	80.3	80.4	80.5	80.9	81.4	82.0	81.9	82.0	82.5	82.5	82.7	81.4
1957	82.8	83.1	83.3	83.6	83.8	84.3	84.7	84.8	84.9	84.9	85.2	85.2	84.3
1958	85.7	85.8	86.4	86.6	86.6	86.7	86.8	86.7	86.7	86.7	86.8	86.7	86.6
1959	86.8	86.7	86.7	86.8	86.9	87.3	87.5	87.4	87.7	88.0	88.0	88.0	87.3
1960	87.9	88.0	88.0	88.5	88.5	88.7	88.7	88.7	88.8	89.2	89.3	89.3	88.7
1961	89.3	89.3	89.3	89.3	89.3	89.4	89.8	89.7	89.9	89.9	89.9	89.9	89.6
1962	89.9	90.1	90.3	90.5	90.5	90.5	90.7	90.7	91.2	91.1	91.1	91.0	90.6
1963	91.1	91.2	91.3	91.3	91.3	91.7	92.1	92.1	92.1	92.2	92.3	92.5	91.7
1964	92.6	92.5	92.6	92.7	92.7	92.9	93.1	93.0	93.2	93.3	93.5	93.6	92.9
1965	93.6	93.6	93.7	94.0	94.2	94.7	94.8	94.6	94.8	94.9	95.1	95.4	94.5
1966	95.4	96.0	96.3	96.7	96.8	97.1	97.4	97.9	98.1	98.5	98.5	98.6	97.2
1967	98.6	98.7	98.9	99.1	99.4	99.7	100.2	100.5	100.7	101.0	101.3	101.6	100.0
1968	102.0	102.3	102.8	103.1	103.4	104.0	104.5	104.8	105.1	105.7	106.1	106.4	104.2
1969	106.7	107.1	108.0	108.7	109.0	109.7	110.2	110.7	111.2	111.6	112.2	112.9	109.8
1970	113.3	113.9	114.5	115.2	115.7	116.3	116.7	116.9	117.5	118.1	118.5	119.1	116.3
1971	119.2	119.4	119.8	120.2	120.8	121.5	121.8	122.1	122.2	122.4	122.6	123.1	121.3
1972	123.2	123.8	124.0	124.3	124.7	125.0	125.5	125.7	----	----	----	----	[1] 124.5

[1] Average for January-August 1972.

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

TABLE 10.—MONTHLY MOVEMENTS IN THE WHOLESALE PRICE INDEX, ALL COMMODITIES, 1945–72

[1967=100]

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Avg.
1945	54.1	54.2	54.3	54.5	54.7	54.8	54.7	54.5	54.3	54.6	55.0	55.2	54.6
1946	55.2	55.5	56.2	56.8	57.2	58.2	64.4	66.5	64.0	69.2	72.1	72.7	62.3
1947	73.2	73.9	75.7	75.2	74.8	74.8	75.6	76.6	78.1	79.1	79.9	81.4	76.5
1948	82.9	81.3	81.3	82.0	82.4	83.0	83.7	84.3	84.2	83.3	83.1	82.6	82.8
1949	81.6	80.3	80.1	79.3	78.6	77.9	77.8	77.9	78.0	77.7	77.7	77.6	78.7
1950	77.6	78.0	78.1	78.1	79.1	79.5	81.7	83.5	85.0	85.5	86.7	89.0	81.8
1951	91.2	92.5	92.5	92.3	92.0	91.3	90.7	90.2	90.0	90.2	90.2	90.1	91.1
1952	89.7	89.3	89.2	88.7	88.6	88.2	88.7	89.1	88.7	88.2	87.8	87.0	88.6
1953	87.2	87.0	87.3	86.8	87.2	86.9	88.0	87.7	88.1	87.5	87.2	87.4	87.4
1954	88.0	87.7	87.7	88.1	88.0	87.3	87.7	87.7	87.3	87.1	87.3	86.9	87.6
1955	87.4	87.7	87.3	87.7	87.2	87.6	87.7	88.0	88.7	88.6	88.2	88.3	87.8
1956	88.8	89.2	89.5	90.2	90.8	90.7	90.5	91.0	91.7	91.7	92.0	92.3	90.7
1957	92.7	92.8	92.7	93.0	92.9	93.2	93.8	94.0	93.7	93.5	93.7	94.1	93.3
1958	94.3	94.4	95.0	94.7	94.8	94.6	94.6	94.5	94.5	94.4	94.6	94.6	94.6
1959	94.8	94.8	94.9	95.2	95.2	95.0	94.8	94.5	95.0	94.5	94.3	94.3	94.8
1960	94.7	94.7	95.2	95.2	95.0	94.8	95.0	94.6	94.6	94.9	94.9	94.8	94.9
1961	95.2	95.2	95.2	94.7	94.3	93.8	94.2	94.3	94.3	94.3	94.3	94.6	94.5
1962	95.0	94.9	94.9	94.6	94.4	94.3	94.6	94.7	95.4	94.8	94.9	94.6	94.8
1963	94.7	94.4	94.2	94.0	94.3	94.5	94.8	94.6	94.5	94.7	94.9	94.5	94.5
1964	95.2	94.7	94.6	94.5	94.3	94.3	94.6	94.5	94.9	95.0	94.9	94.9	94.7
1965	95.2	95.4	95.5	95.9	96.2	96.9	97.0	97.0	97.1	97.2	97.5	98.1	96.6
1966	98.6	99.3	99.3	99.4	99.5	99.6	100.3	100.7	100.7	100.1	99.8	99.8	99.8
1967	100.1	99.9	99.6	99.2	99.7	100.2	100.3	100.0	100.1	100.1	100.1	100.8	100.0
1968	101.1	101.9	102.1	102.1	102.4	102.5	102.8	102.5	102.9	102.9	103.3	103.6	102.5
1969	104.3	104.8	105.4	105.5	106.3	106.8	107.0	106.9	107.1	107.4	108.1	108.6	106.5
1970	109.3	109.7	109.9	109.9	110.1	110.3	110.9	110.5	111.0	111.0	110.9	111.0	110.4
1971	111.8	112.8	113.0	113.3	113.8	114.3	114.6	114.9	114.5	114.4	114.5	115.4	113.9
1972	116.3	117.3	117.4	117.5	118.2	118.8	119.7	119.9	----------	----------	----------	----------	[1] 118.1

[1] Average for January–August 1972.

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

TABLE 11.—INDEXES OF PRODUCTIVITY, HOURLY COMPENSATION AND UNIT COSTS, PRIVATE NONFARM, 1947–72

[1967=100]

Year	Productivity: Output per man-hour—private nonfarm	Compensation per man-hour—Private nonfarm [1]	Unit labor costs—Private nonfarm [2]	Unit nonlabor costs—Private nonfarm [3]	Real compensation per man-hour—Private nonfarm [4]
1947	57.1	38.3	67.1	45.6	57.3
1948	58.8	41.8	71.0	44.2	57.9
1949	61.1	43.0	70.3	51.5	60.2
1950	65.0	45.3	69.7	52.3	62.9
1951	66.3	49.3	74.3	56.3	63.3
1952	66.9	52.0	77.6	58.9	65.3
1953	68.9	54.9	79.7	62.0	68.5
1954	70.5	56.6	80.3	66.0	70.4
1955	73.6	58.6	79.6	66.4	73.0
1956	73.2	62.0	84.7	67.7	76.1
1957	74.8	65.5	87.6	73.8	77.8
1958	76.7	68.1	88.7	80.4	78.6
1959	79.3	71.0	89.5	77.8	81.4
1960	80.3	73.9	92.0	82.2	83.4
1961	82.7	76.3	92.3	86.1	85.1
1962	86.4	79.3	91.8	89.5	87.5
1963	89.1	82.2	92.3	91.6	89.6
1964	92.4	86.1	93.2	92.2	92.6
1965	95.1	89.2	93.9	92.1	94.4
1966	98.4	94.6	96.2	94.1	97.3
1967	100.0	100.0	100.0	100.0	100.0
1968	102.9	107.3	104.3	103.5	102.9
1969	102.7	114.8	111.8	109.2	104.6
1970	103.4	123.1	119.1	120.5	105.8
1971	107.1	131.8	123.2	127.8	108.7
1972 [5]	111.4	139.1	124.9	([6])	111.6

[1] Wages and salaries of employees plus employers' contributions for social insurance and private benefit plans. Also includes an estimate of wages, salaries, and supplementary payments for self-employed persons.
[2] Compensation per man-hour divided by output per man-hour.
[3] Includes net interest, capital consumption allowances, and indirect business taxes; excludes profit-type income.
[4] Compensation per man-hour adjusted for changes in the Consumer Price Index.
[5] Average for the 1st 3 quarters of 1972.
[6] Not available.

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

TABLE 12.—MANUFACTURING OUTPUT, CAPACITY, AND UTILIZATION RATE, 1948–72

Period	1967 output equals 100		Utilization rate [1]		
	Output	Capacity	Total	Advanced products	Primary products
1948	41.5	44.8	92.7	89.8	98.1
1949	39.1	47.3	82.7	82.1	83.8
1950	45.4	49.4	91.9	88.8	97.8
1951	49.3	51.8	95.1	92.5	100.1
1952	50.9	54.9	92.8	93.7	91.2
1953	55.4	58.1	95.5	96.1	94.3
1954	51.4	61.2	84.1	84.7	82.9
1955	58.1	64.4	90.0	87.7	93.7
1956	60.3	68.3	88.2	86.9	90.7
1957	61.1	74.8	84.5	84.1	85.2
1958	56.9	75.7	75.1	75.0	75.2
1959	64.0	78.6	81.4	80.7	82.7
1960	65.3	81.6	80.1	80.3	79.4
1961	65.6	84.5	77.6	77.3	78.2
1962	71.3	87.7	81.4	81.1	81.8
1963	75.7	91.2	83.0	82.5	84.0
1964	81.1	94.8	85.5	84.2	88.0
1965	89.0	100.0	89.0	87.8	91.1
1966	98.1	106.7	91.9	91.8	92.1
1967	99.9	113.7	87.9	89.1	85.7
1968	105.6	120.5	87.7	88.1	86.8
1969	110.4	127.7	86.5	85.4	88.5
1970	105.3	134.6	78.3	76.5	81.5
1971	105.2	140.3	75.0	72.7	79.3
1972 [2]	111.3	144.9	76.8	73.7	82.6

[1] Output as percent of capacity.
[2] Preliminary.

Source: Board of Governors of the Federal Reserve System, based on data of Federal Reserve, Department of Commerce, and McGraw-Hill Information Systems Co.

TABLE 13.—ACTUAL AND POTENTIAL GNP, 1952–72

Year	Gross national product in constant (1958) dollars		Gap between actual and potential GNP	
	Actual value (billions)	Potential level [1] (billions)	Potential less actual (billions) of 1958 dollars	Ratio of actual to potential (percent)
1952	395.1	395.8	0.7	99.8
1953	412.8	409.7	−3.1	100.7
1954	407.0	424.0	17.0	96.0
1955	438.0	438.8	.8	99.8
1956	446.1	454.2	8.1	98.2
1957	452.5	470.0	17.5	96.3
1958	447.3	486.4	39.1	92.0
1959	475.9	503.5	27.6	94.5
1960	487.7	521.1	33.4	93.6
1961	497.2	539.3	42.1	92.2
1962	529.8	558.2	28.4	94.9
1963	551.0	578.6	27.6	95.2
1964	581.1	600.3	19.2	96.8
1965	617.8	622.8	5.0	99.2
1966	658.1	647.1	−11.0	101.7
1967	675.2	673.0	−2.2	100.3
1968	706.6	699.9	−16.7	101.0
1969	724.7	727.9	3.2	99.6
1970	720.0	758.4	38.4	94.9
1971	739.5	791.0	51.6	93.5
1972 [2]	781.9	820.6	38.7	95.2

[1] The estimated output that the economy can produce in real terms under assumed full employment conditions. It represents the maximum level of output the economy can produce without inflationary pressures. It is an imprecise measure of productive capacity. In this series, the potential level of output is based on a growth trend of 3.5 percent per year from 1st quarter 1952 to 4th quarter 1962, 3.75 percent from 4th quarter 1962 to 4th quarter 1965, 4 percent from 4th quarter 1965 to 4th quarter 1969 and 4.3 percent from 4th quarter 1969 to 3d quarter 1972.
[2] Average annual rate for 1st 3 quarters of 1972.

Source: Council of Economic Advisers.

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